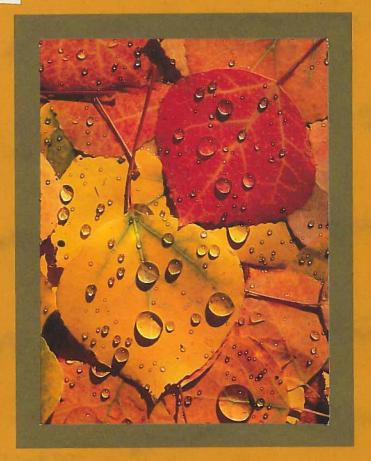
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FINANCIAL REPORT

FOR THE FISCAL YEAR ENDED

DECEMBER 31, 1991



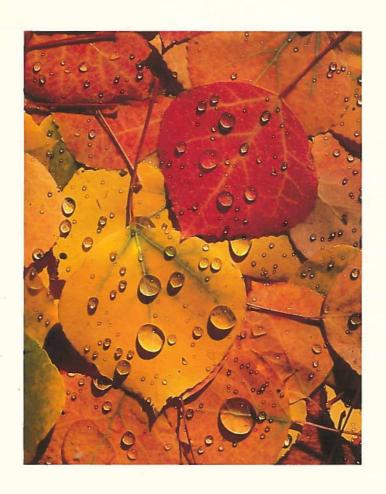


The Public Employees' Retirement Association provides retirement and survivor benefits for the employees of 359 state, school and local government entities in Colorado.

STATISTICAL HIGHLIGHTS AS OF DECEMBER 31, 1991

☐ Benefit Recipients		36,422
☐ Contributing Members		
Service Retirements		
Disability Retirements		382
Member Deaths		112
☐ Benefit Recipient Deaths		1,058
☐ Benefits Paid*	\$	436,184,000
Refunds Paid	\$	28,379,000
☐ Employer Contributions	\$	364,063,000
☐ Member Contributions	\$	242,588,000
☐ Investment Assets	\$	11,492,247,000
☐ Realized Investment Income	\$	875,812,000
☐ 1991 Investment Rate of Return	a	20.1%
☐ Five-Year Average Annual Rate	of	Return 10.4%
☐ Ten-Year Average Annual Rate	of I	Return 13.9%

^{*}Includes health care premium subsidies paid to retirees and other benefit recipients.



COMPREHENSIVE ANNUAL

FINANCIAL REPORT

FOR THE FISCAL YEAR ENDED

DECEMBER 31, 1991

ROBERT J. SCOTT, EXECUTIVE DIRECTOR
1300 LOGAN STREET, DENVER, COLORADO 80203
(303) 832-9550
PREPARED BY THE PERA STAFF



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INTRODUCTORY SECTION

Letter of Transmittal



PUBLIC EMPLOYEES' RETIREMENT ASSOCIATION OF COLORADO

1300 Logan Street Denver, Colorado 80203 General Business Number: (303) 832-9550 InfoLine: 837-6250 or Toll-Free 1-800-759-PERA (7372)

ine: 837-6250 or Toll-Free 1-800-759-PERA (7372)

Dear Members of the Board of Trustees:

I am pleased to present the Comprehensive Annual Financial Report of the Public Employees' Retirement Association (PERA) of Colorado for the year ended December 31, 1991.

The Report consists of seven sections:

- ☐ The Introductory Section contains this Letter of Transmittal, the Board Chairman's Letter, Board of Trustees information, the administrative organizational chart, and a list of the consultants used by PERA.
 - Also included in the Introductory Section is the Plan Summary that outlines the Association's history, purpose, administrative responsibility and benefit programs.
- ☐ The Financial Section contains the opinion of the independent accountants, Price Waterhouse, and the financial statements of the Association.
- □ The Supporting Schedules Section presents several schedules that supplement the Financial Section, including administrative expenses.
- □ The Investments Section presents information regarding the fund's investments and performance, including the Investment Policy, Investment Summary, Colorado Investment Profile, listings of the Association's internally managed stocks and externally managed assets, and brokers utilized.
- □ The Actuarial Section contains the certification of the consulting actuary, Gabriel, Roeder, Smith & Company, along with the results of the actuarial valuation and other actuarial statistics.
- The Statistical Section contains tables of significant data pertaining to PERA and a list of the 359 affiliated employers.
- ☐ The Other PERA Programs Section, presents the scope and activities of other programs in which the Association is involved for the good of its members and benefit recipients. These are the Health Care Program, the Life Insurance Program and the Voluntary Investment Program.

June 19, 1992

Accounting System and Reports

The Report has been prepared in accordance with generally accepted accounting principles applied on a consistent basis as agreed upon by the Governmental Accounting Standards Board (GASB) and the American Institute of Certified Public Accountants. The Financial Statements are presented in accordance with guidelines established by Financial Accounting Standards Board (FASB) Statement No. 35, Accounting and Reporting by Defined Benefit Pension Plans. The Notes to Financial Statements were prepared in accordance with GASB Statement No. 5, Disclosure of Pension Information by Public Employee Retirement Systems and State and Local Government Employers.

PERA's transactions are reported on the accrual basis of accounting for assets, liabilities, revenues and expenses. Revenues for the Association are taken into account when earned without regard to the date of collection. Expenses are recorded when the corresponding liabilities are incurred, regardless of when the payment is made. Fixed assets are recorded at cost and depreciated through charges to expense over the estimated useful lives of the assets.

In developing and evaluating PERA's accounting system, it was found that internal controls adequately safeguard assets and provide reasonable assurance of proper recording of financial transactions.

Contributions are based on the principles of level-cost financing with current service financed on a current basis. Prior service is amortized over varying periods depending on the respective Division, i.e., 31 years for the State Division, 21 years for the School Division, 25 years for the Municipal Division and 16 years for the Judicial Division.

Certificate of Achievement

The Government Finance Officers Association (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to PERA for its financial report for the fiscal year ended December 31, 1990. To be awarded a Certificate of Achievement, a public employee retirement system must publish a readable and organized report that conforms to program standards. A Certificate of Achievement is valid for a period of only one year. The Association's Comprehensive Annual Financial Reports have been awarded this distinction for the past six years, and we believe our current Report continues to meet GFOA requirements. Therefore, this Report is being submitted to GFOA to determine its eligibility for another Certificate.

Revenues

The revenues needed to finance retirement benefits are accumulated through the collection of employer and member contributions, and through income on investments. Contributions and investment income, including unrealized gains and losses for 1991, totaled \$2,459,724,000.

There was an increase of approximately \$50,747,000 in total contributions, resulting from increases in the number of members and the amounts of their salaries.

Expenses

The primary expense of a retirement system relates to the purpose for which it is created, that is, the disbursement of retirement and survivor benefits. These recurring benefit payments, along with refunds of contributions to members who terminate employment, subsidies toward health care premiums and the cost of administering PERA comprise the total expense. In 1991, this totaled \$482,448,000, an increase of 9 percent from 1990.

Total revenues of \$2,459,724,000 exceeded expenses of \$482,448,000 by \$1,977,276,000 during 1991. Administrative expenses are controlled by an annual budget approved by the Board of Trustees, and represent 0.1 percent of total assets.

Value of Accumulated Plan Benefits (Reserves)

Accumulated plan benefits, as presented in our audited financial statements, total \$8,968,489,000. This amount is calculated in accordance with FASB Statement No. 35, which does not take into consideration the effect of future salary increases.

For clarification, we also present in the Actuarial Section a summary of PERA's unfunded actuarial accrued liabilities. These are calculated using assets on a historical cost basis, and include the effect of projected future salary increases on liabilities. The Notes to Combined Financial Statements on pages 18 to 25 are governed by GASB Statement No. 5 and present actuarial valuations including future salary increases and assets at market value.

Investments

The investment portfolio income is a major contributor to PERA. In 1991, realized income from both long-term and short-term investments amounted to \$875,812,000. This exceeded the contributions by members and employers of \$242,588,000 and \$364,063,000, respectively.

For the year ended December 31, 1991, the total fund had a rate of return of 20.1 percent on a market value basis, the highest return in the last five years. The Association's annualized rate of return over the last five years was 10.4 percent, and over the last 10 years, the return was 13.9 percent.

A further explanation of PERA's investment policies and strategies is presented in the Investment Policy Summary on page 38. Changes in the composition of the total portfolio during the year are reflected in the Investment Summary on page 39.

Proper funding and healthy investment returns are very important to the financial soundness of PERA. The ratio of investment earnings to total revenue is evidence of the Association's continued solid financial management.

Asset Allocation

An integral part of the overall investment policy is the strategic asset allocation policy. This allocation mix is designed to provide an optimal mix of asset categories. This, in turn, emphasizes a maximum diversification of the portfolio.

Both traditional (cash, bonds, domestic stocks, fixed income and mortgages) and non-traditional (real estate, guaranteed investment contracts, international stocks and fixed income, venture capital and leveraged buyouts) assets are incorporated into the mix.

Funding

The bottom line for a retirement system is its level of funding. If this level is adequate, the ratio of total accumulated assets to total liabilities will be larger, and more funds are available for investment purposes. Also, an adequate funding level gives the participants a higher degree of assurance that their pension benefits are secure.

The advantage of a well-funded plan is that participants can see assets which are irrevocably committed to the payment of promised benefits. Although the historical level of funding for PERA is good (as illustrated by the Solvency Test on page 56), continued effort is being directed at maintaining this level. Furiding levels are presented in the Actuarial Section of this Report.

Finally, expressing net assets available for benefits as a percentage of the pension benefit obligation provides another indication of PERA's funding status on a "going-concern" basis. Over time, an analysis of this percentage, as illustrated in the Schedule of Funding Progress on page 25, indicates the strength of the system.

Professional Services

Professional consultants are hired to perform services essential to the efficient operation of the Association. Reports from the independent accountants and actuary are included, and PERA's consultants are listed on page 12.

Review of Operations and Activities of 1991

PERA devotes much attention to advising members about their current or future benefits, and assisting them in making personal data record changes. During 1991, staff members met individually with more than 4,200 members and benefit recipients in PERA's offices, and responded to more than 29,000 telephone inquiries and 31,000 letters and other inquiries.

Also, InfoLine, a toll-free telephone information center, answered more than 64,000 calls from members, retirees and employers.

PERA employees conducted 262 meetings and staffed 29 information tables at events throughout Colorado to provide information about plan benefits; more than 9,400 members, retirees, and other persons attended these meetings and more than 1,700 persons were contacted at the information tables.

Also, 19 meetings were held to educate nearly 700 PERA-affiliated employer staff members about procedures and policies. Finally, the PERA Field Counseling Program provided individual counseling to more than 1,000 members around the state.

In May 1991, a Board of Trustees election was held. Three Board members were re-elected to their positions - Roberta J. Altenbern to represent School Division members, Richard Lansford to represent School Division members (for a one-year term only) and Carl Wilkerson to represent retired members. A new member, Julie Konzak, was elected to represent State Division members. Also, two incumbents ran unopposed in the election — Gar McInnis who represents Municipal Division members, and Judge Donald P. Smith, Jr., who represents Judicial Division members.

In December, Dr. Terry L. Lantry resigned from the Board and George H. Meares was appointed to fill his seat until the next scheduled election in May 1992.

During 1991, 22 new public employers affiliated with PERA.

The PERA Voluntary Investment Program (VIP), a 401(k) tax-deferred supplemental retirement plan, continued to progress during the year. Assets grew from \$19,242,631 at the end of 1990, to \$30,017,532 at the end of 1991. The Other PERA Programs Section contains a detailed report on VIP on page 74.

Acknowledgements

The cooperation of our 359 affiliated employers contributes significantly to PERA's success. We thank them for their continuing support.

The compilation of this Report reflects the combined efforts of the PERA staff. It is intended to provide complete and reliable information as a basis for making management decisions, determining compliance with legal provisions and determining responsible stewardship of assets contributed by the members and their employers. The Report is being mailed to all affiliated employers and other interested persons; a summary will be published in the next issue of the PERA Member Report and the PERA Retiree Report.

I would like to express my gratitude to the staff, Board of Trustees, consultants and other associates who worked diligently to ensure the successful operation of PERA in 1991.

Respectfully submitted,

Robert J. Scott, Executive Director

Certificate of Achievement for Excellence in Financial Reporting

Presented to

Public Employees' Retirement Association of Colorado

For its Comprehensive Annual Financial Report for the Fiscal Year Ended December 31, 1990

A Certificate of Achievement for Excellence in Financial Reporting is presented by the Government Finance Officers Association of the United States and Canada to government units and public employee retirement systems whose comprehensive annual financial reports (CAFRs) achieve the highest standards in government accounting and financial reporting.



President

i i coideii

Executive Director

Board Chairman's Letter



PUBLIC EMPLOYEES' RETIREMENT ASSOCIATION OF COLORADO

1300 Logan Street Denver, Colorado 80203 General Business Number: (303) 832-9550 InfoLine: 837-6250 or Toll-Free 1-800-759-PERA (7372)

June 19, 1992

To all PERA Members, Benefit Recipients and Employers:

The 1991 Comprehensive Annual Financial Report of the Public Employees' Retirement Association of Colorado presents a detailed view of the financial and actuarial status of your retirement system. I hope you will be pleased with PERA's growth and overall 20.1 percent annual rate of return.

The Board is dedicated to preserving the financial integrity of the fund through a sound fiscal management program. It takes its role very seriously, and has spent considerable time in becoming knowledgeable in investment and asset allocation strategies and policies.

During the 1991 Colorado General Assembly, House Bill 1026 was proposed by the Association and became law. This bill required PERA membership of nearly all employees of PERA-affiliated employers. It was written in response to federal legislation passed in 1990 that required Social Security coverage for public employees not covered by a retirement plan. PERA believes that mandatory membership has advantages for these employees which Social Security does not offer. As a result of the legislation, PERA's membership increased by more than 25,000 in 1991.

In a special session of the General Assembly, House Bill 1031 was proposed by the Association and became law. This bill provided for interest to be credited to member contribution accounts beginning July 1, 1991.

In other action, the Board voted to change the actuarial assumption rate effective January 1, 1992. This change will be noted in the 1992 Comprehensive Annual Financial Report.

As PERA assets grow, the fund is increasingly affected by outside factors. The Board cautiously considers benefit enhancements and, in November 1991, the Board decided to initiate legislation to address some of the weaknesses in the plan. In December, the Joint Budget Committee (JBC) of the General Assembly proposed large cuts in PERA's employer contribution rates as part of a state deficit reduction package. The Board opposed this measure, and a compromise was reached that eventually passed which includes important benefit changes and a limited reduction in employer contributions that does not jeopardize the actuarial soundness of the trust funds.

In closing, the Board and I extend our thanks for your support and interest. With it, PERA continues to be a leader in public employee retirement systems.

Sincerely,

Frank V. Taulli

Chairman, Board of Trustees

Frank V. Taulle-

Board of Trustees

By state law, the management of the public employees' retirement fund is vested in the Board of Trustees of the Public Employees' Retirement Association of Colorado.

The Board is composed of 16 members, including the State Auditor and the State Treasurer as ex-officio members. The 14 representative members are elected by mail ballot of their respective division members to serve on the Board for a four-year-term. Five members are elected from the School Division, four from the State Division, two from the Municipal Division, and one from the Judicial Division. Two members represent benefit recipients. If a Board member resigns, a new member is appointed from the respective Division for the remainder of the year until the next election.

	Following is the list of Board members wh	o serve	ed during calendar year 1991			
	Frank V. Taulli		Ma	ursha M. Jack	son	
	Chairman of the Board			e Chairman of		pard
	☐ Member since 1977			Member sinc		
	Represents school e	mplove	_	Represents so		
	☐ Elementary school p			Elementary c		· ·
	Pueblo Public Schoo			Mesa County		
	Current term expires	2004 00000				es July 1, 1992
						Was Nadala
	berta Altenbern		thard Lansford		_	Kim Natale
	Member since 1977		Member since 1990			Member since 1985
	Represents school employees		Represents school employe			Represents school employees
	Media specialist, Adams County		Math teacher, Jefferson Cou	anty Public		Math and science teacher,
-	School District 14		Schools			Jefferson County Public Schools
	Re-elected in May 1991 Current term expires July 1, 1995		Re-elected for one year in I serve until term expires on			Current term expires July 1, 1993
_	Current term expires july 1, 1995		1992.	july 1,	Tir	nothy M. O'Brien
Pat	rick E. Dougherty		1772.			Member since 1985
	Member since 1988	Dr.	Terry L. Lantry		ō	State Auditor
	Represents municipal employees		Member since 1976		_	Continuous term, ex-officio
	Developmental Engineer, City of		Represents state employee	ec .		Continuous term, ex onicio
_	Arvada		Professor, Accounting & Bu		Ga	il Schoettler
	Current term expires July 1, 1994		Colorado State University	Jiness Lavv,		Member since 1987
	Current term expires july 1, 1994		Resigned in December 199	11	ō	State Treasurer
lok	in Ehnes	_	Resigned in December 199	1		Continuous term, ex-officio
	Member since 1989	Wi	illiam Maguire			continuous terri, ex oricio
	Represents state employees		Member since 1985		Do	onald P. Smith, Jr.
0	Employee Benefits Manager, State of		Represents state employee	NE.		Member since 1987
	Colorado		Personnel Specialist,	.5	0	Represents judges
	Current term expires July 1, 1993	J	Colorado State Hospital			Judge, Colorado Court of Appeals
_	Cultent term expires july 1, 1993		Current term expires July 1	1004		Ran unopposed in May 1991
Ad	a Houck		Current term expires july 1	, 1994		Current term expires July 1, 1995
	Member since 1973	Ga	r McInnis		_	current term expires july 1, 1995
0	Represents retirees		Member since 1986		Ca	url S. Wilkerson
0	Retired elementary teacher	0	Represents municipal emp	ovees		Member since 1987
	Current term expires July 1, 1993		Risk and Insurance Adminis	-	ā	Represents retirees (represented
	Current term expires july 1, 1995	_	City of Colorado Springs	strator,		School Division members from 1958-
Indi	le Konzak		Ran unopposed in May 19	21		1977)
	Member since 1991		Current term expires July 1			Retired Deputy Executive Director,
0			Current term expires july 1	, 1993		PERA
0	Represents state employees Assistant Vice President of Academic	Co	orge H. Meares			Current term expires July 1, 1995
_			Member from July 1, 1987	to lune 30		current term expires july 1, 1993
	Affairs, University of Northern					
	Colorado Current term expires July 1, 1995		1991; re-appointed to the			
	Current term expires july 1, 1995		Dr. Lantry's resignation in I	recentibel		
				0.5		
			Represents state employee Controller, State Departme			
		_	Highways	iii Oi		

Current term expires on June 30, 1992

The Plan Summary

The Public Employees' Retirement Association was established in 1931 by the Colorado General Assembly as an instrumentality of the State. It initially covered only state employees, but membership has expanded to include all school districts except Denver, numerous municipalities, special districts, public health departments and other local government entities, as well as the State's judicial system.

The plan's purpose is to provide benefits to members and their dependents at retirement or in the event of death or disability. The plan is funded on an actuarial reserve basis, with money being set aside for benefits while the benefits are being earned and before they are paid.

Administration of the Plan

The plan operates by the authority of the Colorado General Assembly, with benefits and administration defined under Title 24, Article 51, of the Colorado Revised Statues. PERA is governed by a 16-member Board of Trustees, 14 of whom are elected by the membership to four-year terms and serve without compensation except for necessary expenses. The State Auditor and the State Treasurer serve as ex-officio members.

The Board appoints an Executive Director who is responsible for the daily administration of the Association. The Board retains an actuary to make annual valuations of the funding adequacy of the liabilities accrued under the plan. The Board also retains other consultants, as necessary.

Member Contributions

Most members contribute 8 percent of their gross salary to a member contribution account. State troopers contributed 12.3 percent in 1991. Salary is compensation for services rendered.

Member contributions have been tax-deferred for federal income tax purposes since 1984 and for state income tax purposes since 1987. Therefore, contributions are not considered as income for federal or state income tax purposes until they are withdrawn through a refund or a benefit.

Employer Contributions

Affiliated employers also contribute a percentage of their total payroll to the fund. The rates of employer contributions are calculated by the Association's actuary and are set by law: State Division, 11.6 percent; State Troopers, 13.2 percent; School Division, 12.2 percent; Municipal Division, 10 percent; and Judicial Division, 15 percent.

The Schedule of Computed Employer Contribution Rates on page 59 shows a detailed explanation of how the employer contributions are distributed.

These contributions are credited to the respective division for the purpose of creating actuarial reserves, so each member's benefits are fully provided for at retirement.

Termination

A member who terminates PERA-covered employment may request a refund of all of the contributions he or she made to PERA plus interest credited from July 1, 1991 (or the date of membership, whichever is earlier), to the date the account is refunded. A refund cancels any accrued PERA benefits. A member may also leave his or her member contribution account at PERA.

If a member has five or more years of service, and leaves his or her contributions in the account, he or she may (without further payment) apply for a benefit when reaching the eligible age for retirement.

Retirement Benefits

PERA benefits are calculated as a percentage of Highest Average Salary (HAS). This is 1/12 of the average of the highest three annual salaries earned during calendar year periods on which PERA contributions were paid. A 15 percent limitation applies to annual salary increases in the three years prior to retirement.

Service retirement benefits in 1991 were equal to 2.5 percent of HAS for each year of service credit through 20 years, and 1.25 percent of HAS for each year between 20 and 40 years. PERA's maximum benefit in 1991 was 75 percent of HAS.

Service retirement benefits are available to members at any age with 35 years of service, age 55 with at least 30 years of service, age 60 with at least 20 years of service, or age 65 with at least 5 years of service.

A reduced service retirement benefit is calculated the same as a service retirement benefit, then decreased by 0.333 percent for each month prior to the eligible date for a service retirement. The reduction equals 4 percent per year. A member is eligible to receive a reduced service retirement benefit at age 55 with 20 years of service credit, or at age 60 with 5 years of service credit.

Retirement benefits for state troopers and members of the Judicial Division differ slightly.

Survivor Benefits

If a member dies before retirement with at least one year of PERA service credit, his or her eligible, unmarried dependent children will receive monthly survivor benefits. Children are eligible if under age 18 or, if enrolled full-time in an accredited school within six months of the member's death, until they reach age 23.

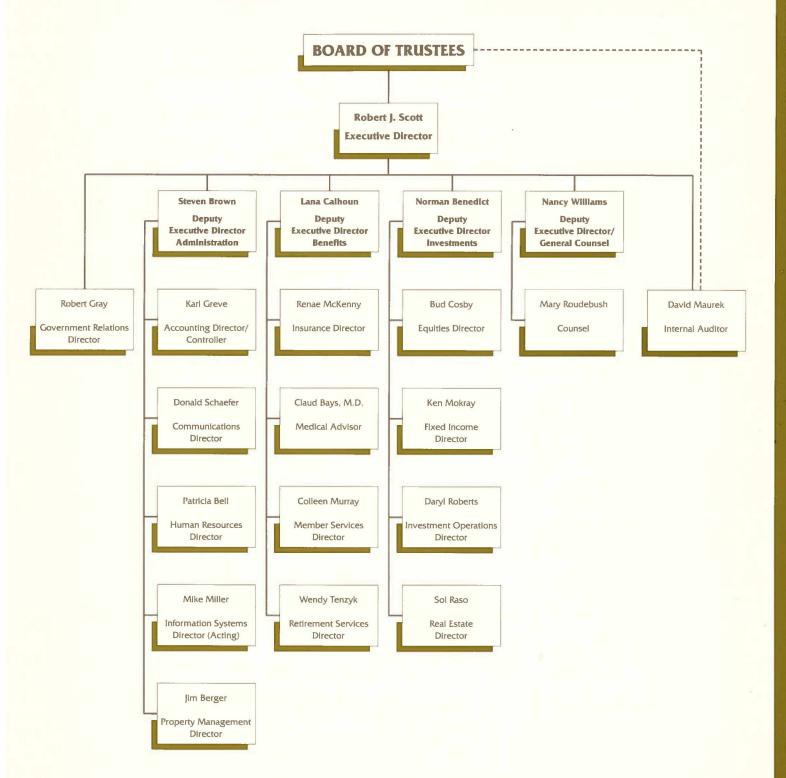
If there are no eligible children, or after benefits to children have ceased, the member's surviving spouse receives a monthly benefit at age 60 if the member had less than 10 years of service credit (and the spouse did not remarry), or immediately if the member had more than 10 years of service at the time of death. If there is no eligible spouse, financially dependent parents will receive the survivor benefit.

If the member's death was job-incurred, the service credit minimum is waived. If there are no eligible survivors, the named beneficiary or, if no named beneficiary exists, the estate will receive a single payment of the deceased member's contributions.

Disability Retirement

Members with five or more years of earned service credit, six months of which has been earned since the most recent period of membership, are eligible for disability retirement benefits if determined by the Board to be permanently disabled from performing their jobs. The disability retirement benefit is a percentage of HAS based on actual service credit plus projected service credit to age 65 or 20 years of service, whichever is less. Many disabled retirees receive 50 percent of their HAS.

Administrative Organizational Chart



Consultants

Health Care Program Actuary

Buck Consultants Bank Western Tower 1675 Broadway, Suite 1950 Denver, CO 80202

Independent Accountants

Price Waterhouse 950 Seventeenth Street, Suite 2600 Denver, CO 80202

Investments — Portfolio Consultant

William M. Mercer Asset Planning, Inc. 3500 Texas Commerce Tower 2200 Ross Avenue Dallas, TX 75201

Investment Performance Analyst

R.V. Kuhns & Associates, Inc. 1211 SW Fifth Avenue, Suite 2850 Portland, OR 97204

Investments — Real Estate

Heitman Advisory Corporation 180 North LaSalle Street Chicago, IL 60601

Institutional Property Consultants, Inc. 4330 La Jolla Village Drive, Suite 310 San Diego, CA 92122

La Salle Advisors Limited 11 South LaSalle Street Chicago, IL 60603

Lehndorff and Babson Real Estate Counsel 2501 Cedar Springs, Suite 550 Dallas, TX 75201

The Prudential Realty Investors 751 Broad Street Newark, NJ 07101

Pension Actuary

Gabriel, Roeder, Smith & Company 407 East Fort Street, Suite 200 Detroit, MI 48226

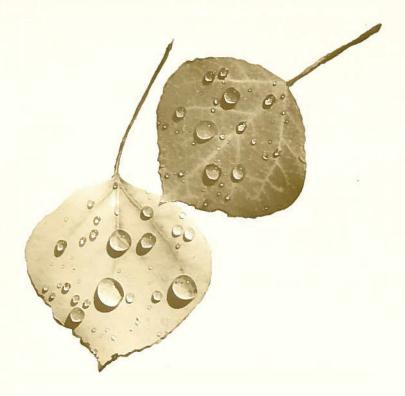
Risk Management

Johnson & Higgins of Colorado, Inc. 950 Seventeenth Street, Suite 1850 Denver, CO 80202

Investments — Economists

Boston Company Economic Advisors, Inc. One Boston Place Boston, MA 02109

The Northern Trust Company 50 South LaSalle Street Chicago, IL 60675



FINANCIAL SECTION

Report of the Independent Accountants

950 Seventeenth Street Suite 2600 Denver, CO 80202 Telephone 303 893 8100

Price Waterhouse



May 22, 1992

To the Participants and Board of Trustees of the Public Employees' Retirement Association of Colorado and the Legislative Audit Committee of the State of Colorado

In our opinion, the accompanying combined statement of net assets available for benefits and of accumulated plan benefits, and the related combined statements of changes in net assets available for benefits and of changes in accumulated plan benefits present fairly, in all material respects, the financial status of the Public Employees' Retirement Association of Colorado ("PERA," a public association of the State of Colorado) at December 31, 1991 and 1990, and the changes in its financial status for the years then ended, in conformity with generally accepted accounting principles. These financial statements are the responsibility of PERA's management; our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with generally accepted auditing standards which require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for the opinion expressed above.

Our audits were made for the purpose of forming an opinion on the basic financial statements taken as a whole. The additional information included in Schedules I, II, III, and IV are presented for purposes of additional analysis and are not a required part of the basic financial statements. Such information has been subjected to the auditing procedures applied in our audits of the basic financial statements and, in our opinion, is fairly stated in all material respects in relation to the basic financial statements taken as a whole.

Price Waterhoun

Combined Statement of Net Assets Available for Benefits

As of December 31, 1991 and 1990 (In Thousands of Dollars)

Assets	1991	1990
Investments, at fair value:		
U.S. Government obligations	\$1,547,775	\$1,421,732
Domestic corporate bonds	2,321,784	1,909,357
Domestic stocks	4,219,431	3,251,397
International stocks	1,369,101	1,211,768
International fixed income	211,499	_
Guaranteed investment contracts	505,602	463,854
Fixed rate mortgages	267,039	300,654
Real estate	443,844	485,874
Participating mortgages	96,228	87,430
Leveraged buyout funds	118,639	75,964
Venture capital funds	101,830	70,378
Municipal bonds	15,775	12,250
Total investments	11,218,547	9,290,658
Receivables:		
Employers	49,353	45,659
Interest and dividends	107,721	87,976
Other	2,756	2,152
Total receivables	159,830	135,787
Cash and short-term investments	273,700	213,114
Property and equipment, at cost, net of accumulated depreciation		
of \$6,711 and \$5,164, respectively	15,645	16,315
Total assets	11,667,722	9,655,874
Liabilities and Reserves		
LIADINGES AND RESCIVES		
Refunds payable and other	50,170	15,597
Reserves:		
Insurance dividend reserve	14,593	13,771
Health care fund	61,080	49,437
Total reserves	75,673	63,208
Total liabilities and reserves	125,843	78,805
Commitments and contingencies (Note 6)		****
Net assets available for benefits	\$11,541,879	\$9,577,069

The accompanying notes to combined financial statements are an integral part of these statements.

Combined Statement of Changes in Net Assets Available for Benefits

For the Years Ended December 31, 1991 and 1990 (In Thousands of Dollars)

	1991	1990
Investment income:		
Realized gains (losses) on investments	\$ 274,575	\$ (10,564)
Interest	429,017	411,835
Dividends	142,267	132,237
Unrealized appreciation (depreciation) in fair value of investments	925,436	(619,110)
Real estate operating income, net	29,953	28,089
Foreign exchange translation gains	28,917	67,076
Total investment income	1,830,165	9,563
Contributions:		
Employers	364,063	340,786
Members	242,588	225,651
Retiree health care premiums	12,496	6,063
Purchased service	10,412	6,312
Total contributions	629,559	578,812
Transfers:		
Benefits paid to retirees	(388,526)	(349,931)
Benefits paid to survivors	(12,118)	(11,363)
Benefits paid to health care participants	(35,540)	(29,948)
Refunds of contribution accounts	(28,379)	(32,621)
Other, net	(4,572)	(6,217)
Total transfers	(469,135)	(430,080)
Administrative expenses.	(13,313)	(11,381)
Net (increase) decrease in insurance dividend reserve, net of administrative fees	(823)	1,800
Net (increase) decrease in reserve for health care fund	(11,643)	2,632
Net increase	1,964,810	151,346
Net assets available for benefits:		
Beginning of year	9,577,069	9,425,723
End of year	\$11,541,879	\$ 9,577,069

The accompanying notes to combined financial statements are an integral part of these statements.

Combined Statement of Accumulated Plan Benefits

As of December 31, 1991 and 1990 (In Thousands of Dollars)

	1991	1990
Actuarial present value of accumulated plan benefits: Vested benefits:		
Benefit recipients	\$4,175,112	\$3,755,580
Other members	4,049,779	3,686,718
Total vested benefits	8,224,891	7,442,298
Non-vested benefits	743,598	667,662
Total actuarial present value of accumulated plan benefits	\$8,968,489	\$8,109,960

The accompanying notes to combined financial statements are an integral part of these statements.

Combined Statement of Changes in Accumulated Plan Benefits

For the Years Ended December 31, 1991 and 1990 (In Thousands of Dollars)

	1991	1990
Actuarial present value of accumulated plan benefits at beginning of year	\$8,109,960	\$7,260,801
Increase (decrease) during the year attributable to:		
Benefits accumulated and interest amortization, net of refunds	1,259,173	1,210,453
Benefits paid	(400,644)	(361,294)
Actuarial present value of accumulated plan benefits at end of year	\$8,968,489	\$8,109,960

The accompanying notes to combined financial statements are an integral part of these statements.

December 31, 1991 and 1990 (In Thousands of Dollars)

NOTE 1 - GENERAL DESCRIPTION OF THE PLAN

Organization

The Public Employees' Retirement Association of Colorado ("PERA") was established in 1931 under Title 24, Article 51, Section 201 of the Colorado Revised Statutes, as amended. PERA is defined as a cost-sharing, multiple-employer defined benefit pension plan (the "Plan"). The Plan's purpose is to provide benefits to members at retirement, or in the event of a death or disability. These members are employed by public employers (most of whom do not participate under Social Security) located in the State of Colorado and affiliated with PERA.

Responsibility for the organization and administration of the Plan is placed with the Public Employees' Retirement Association Board of Trustees (the "Board"). The State Division Trust Fund was established in 1931, the School and Municipal Division Trust Funds in 1944 and the Judicial Division Trust Fund in 1949.

The number of affiliated employers for the four divisions are as follows:

	As of December 31		
	1991	1990	
State	79	76	
School	195	203	
Municipal	79	57	
Judicial	6	6	
Total employers	359	342	

Benefit recipients and members in PERA consisted of the following as of December 31, 1991 and 1990:

					Combin	ed Totals
	State	School	Municipal	Judicial	1991	1990
Retirees and beneficiaries currently receiving benefits, and terminated members entitled to benefits but						
not yet receiving them	17,164	19,973	1,939	187	39,263	37,467
Members:						
Vested	23,498	37,901	4,051	188	65,638	63,827
Non-vested	24,045	37,507	5,054	67	66,673	43,071
Totals	64,707	95,381	11,044	442	171,574	144,365

House Bill 1026 was passed by the Colorado General Assembly in 1991, and required all employees working for PERA-affiliated employers, including part-time, substitute and temporary employees, to join PERA on July 1, 1991. This mandatory membership greatly increased the number of PERA's non-vested members.

Reporting Entity

The Board oversees all funds included in the combined financial statements of PERA. The Board's responsibilities include designation of management, the ability to significantly influence operations and accountability for fiscal matters.

PERA is an instrumentality of the state; it is not an agency of state government. Also, it is not subject to administrative direction by any department, commission, board, bureau or agency of the State. Accordingly, PERA's financial statements are not included in the financial statements of any other organization.

Contributions

Member and employer contributions are based on actuarial valuations performed annually, using the methods prescribed by National Council on Governmental Accounting Statement No. 1, Governmental Accounting and Financial Reporting Principles.

Members are required to contribute 8 percent of their gross salary to PERA, except for State Patrol Troopers ("State Troopers"), who contribute 12.3 percent. These contributions are placed in individual member accounts. Member contributions are tax-deferred for federal and state income tax purposes, effective July 1, 1984, and January 1, 1987, respectively. Prior to those dates, contributions were made on an after-tax basis.

Members who terminate PERA-covered employment may request a refund of their contribution account. Effective July 1, 1991, PERA members requesting refunds receive interest on their contribution accounts from July 1, 1991, or the date of membership until the date of withdrawal. The interest rate is set annually by the Board to equal the interest rate earned on 90-day U.S. Treasury Bills at the end of the

(In Thousands of Dollars)

previous year. However, the interest rate will not be less than the prevailing passbook savings rate in Colorado, nor will it be more than the actuarial investment assumption rate. The 1991 interest rate was 5.7 percent.

Refunds do not include employer contributions, and cancel any accrued PERA benefits. However, members who previously received a refund of their contributions may reinstate this service credit through lump-sum or installment payments when they have one year of earned service credit. Also, any PERA member can increase service credit by purchasing service credit for paid sabbatical leaves and certain periods of non-covered, non-vested private or public employment through lump-sum or installment payments.

PERA-affiliated employers also contribute a percentage of payroll. The contribution rates for the combined retirement benefits, cost-of-living increases and health care benefits were as follows:

		of Members' Salaries			
Division	Membership	July 1, 1991 through December 31, 1991	January 1, 1990 through June 30, 1991		
State	All members except State Troopers	11.6%	12.2%		
	State Troopers	13.2%	13.2%		
School	All members	12.2%	12.5%		
Municipal	All members	10.0%	10.2%		
ludicial	All members	15.0%	15.0%		

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These contributions are deposited in a trust fund established for each division for the purpose of creating actuarial reserves for future benefits.

Benefits

Members are eligible for service retirement benefits when they meet the following requirements:

Minimum Service Credit	Minimum Age
35 Years	Any Age
30 Years	55
20 Years	60
5 Years	65
60 Months on Payroll	65

PERA retirement benefits are equal to 2.5 percent of Highest Average Salary ("HAS") for each year of service credit through 20 years, and 1.25 percent of HAS for each year between 20 and 40 years. HAS is 1/12 of the average of the highest three annual salaries earned during calendar year periods on which PERA contributions were paid. The maximum benefit payable is 75 percent of HAS.

Members may also retire earlier with a reduced benefit at age 55 with 20 or more years of service credit, or at age 60 with five or more years of service credit. A reduced service retirement benefit is calculated the same as a service retirement benefit, then decreased by 0.333 percent for each month prior to the eligible date for a service retirement. The reduction equals 4 percent per year. Members elect to receive their benefits in the form of single or joint-life monthly payments.

PERA also provides disability retirement and survivor benefits. Members who become permanently disabled with at least five years of earned service, six months of which has been earned since the most recent period of membership, are eligible to apply for disability retirement. This benefit is a percentage of HAS based on actual service credit, plus projected service to age 65 or 20 years of service, whichever is earlier. The HAS calculation is the same calculation used for service retirement. Disability retirees who retired after July 1, 1988, and who are under service retirement age, may have their benefits reduced based on earned income.

A minimum benefit of 25 percent of HAS is paid at some point to the qualified survivors of active members who die, provided such members have earned at least one year of service credit.

Retirement eligibility and benefits for State Troopers and members of the Judicial Division differ slightly.

Termination of PERA

If PERA is partially or fully terminated for any reason, State law provides that the rights of all members and benefit recipients to all benefits on the date of termination, to the extent then funded, will become nonforfeitable.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Accounting and Presentation

The accompanying financial statements are prepared using the accrual basis of accounting, in accordance with generally accepted accounting principles applicable to governmental accounting for a pension trust fund under the criteria of Financial Accounting Standards Board ("FASB") Statement No. 35, Accounting and Reporting by Defined Benefit Pension Plans. The various funds have been presented on a

(In Thousands of Dollars)

combined basis, with all interfund balances and transactions eliminated in the combined financial statements. Certain 1990 balances have been reclassified to be consistent with the 1991 presentation.

Fund Accounting

The financial activities of each division, Cost of Living Stabilization Fund, Health Care Fund, Insurance Dividend Reserve and Common Operating Fund, are recorded in separate trust funds. All funds own a percentage of the combined investment fund, except for the Common Operating Fund. Each division maintains separate accounts, and all actuarial determinations are made using separate division-based information.

The Cost of Living Stabilization Fund ("CLSF") is funded by employer contributions equal to 2 percent of member salaries. These contributions are collected by each division and deposited in the CLSF. This supplemental benefit is paid directly to PERA's benefit recipients by each division, then reimbursed by transfers from the CLSF. The calculation of the total actuarial present value of accumulated plan benefits, included in the Combined Statement of Accumulated Plan Benefits and Combined Statement of Changes in Accumulated Plan Benefits, does not include a provision for cost-of-living increases from the CLSF.

The Health Care Fund ("HCF") is funded by employer contributions equal to 0.8 percent of member salaries. These contributions are collected by each division and deposited in the HCF. Beginning July 1, 1986, the HCF began subsidizing the premiums for benefit recipients enrolled in the Health Care Program. The calculation of the total actuarial present value of accumulated plan benefits, included in the Combined Statement of Accumulated Plan Benefits and Combined Statement of Changes in Accumulated Plan Benefits, does not include a provision for subsidized premiums from the HCF.

The Common Operating Fund ("COF") accounts for all administrative activities common to the divisions. Operating assets and liabilities held for all divisions are also recorded in the COF. The expenses incurred by PERA are allocated from the COF to the various divisions on the basis of the number of members and retirees in the division to the total membership in PERA. The net assets available for benefits within the COF are allocated to the division funds.

The Insurance Dividend Reserve ("IDR") is an accumulation of dividends received from an insurance company as a return on the premiums paid, adjusted for actual historical experience by members. The IDR is used to provide increased life insurance benefits without increasing premiums to life insurance participants.

Investments

Plan investments (excluding the guaranteed investment contracts and short-term investments) are presented at fair value. Securities traded on a national or international exchange are valued at the last reported sales price at current exchange rates. Other investments which do not have an established market (including participating mortgages, leveraged buyout funds and venture capital funds), are recorded at estimated fair values.

Corporate bonds which are not traded on a national or international exchange are based on equivalent values of comparable securities with similar yield and risk. Mortgages are valued on the basis of future principal and interest payments, and are discounted at prevailing interest rates for similar instruments. The fair value of real estate investments is based on independent appraisals.

Guaranteed investment contracts (Note 4) are recorded at contract value, representing principal plus accrued interest at the stated contract rate. Short-term investments are carried at cost, which approximates fair value.

The change in the fair value of investments held at year end is reflected in the Combined Statement of Changes in Net Assets Available for Benefits as unrealized appreciation or depreciation. Unrealized appreciation (depreciation) in the fair value of investments for the years ended 1991 and 1990, are as follows:

	1991	1990
Fair values measured by quoted prices in active markets:		
Cash and short-term investments	\$ 2,401	\$ 2,280
U.S. Government obligations	108,588	(6,679)
Domestic corporate bonds	126,527	(28,957)
Domestic stocks	626,731	(230,439)
International stocks	97,998	(311,714)
International fixed income	10,741	_
Municipal bonds	3,525	(17,371)
Fair values measured otherwise:		
Guaranteed investment contracts		_
Fixed rate mortgages	17,665	(3,006)
Real estate	(82,160)	(13,726)
Participating mortgages	297	_
Leveraged buyout funds	10,650	(10,124)
Venture capital funds	2,473	626
Total	\$ 925,436	\$ (619,110)

(In Thousands of Dollars)

The Division trust funds, the CLSF, the HCF, and the IDR pool their investments into a common investment portfolio. Investment value and earnings of the investment pool are allocated among the funds based on each fund's ownership as a percentage. As of December 31, 1991 and 1990, the ownership percentages of each fund were as follows:

	Ownership As of Dec	Percentage ember 31
School	1991	1990
State	38.28%	38.10%
School	54.62%	54.88%
Municipal	5.12%	5.09%
Judicial	0.53%	0.54%
CLSF	0.76%	0.68%
HCF	0.56%	0.57%
IDR	0.13%	0.14%
Total	100.00%	100.00%

Actuarial Valuation

Accumulated plan benefits are future periodic payments, plus lump-sum distributions, which current members have earned to-date. These include benefits expected to be paid to retired or terminated members, or their cobeneficiaries, qualified survivors of members who have died, and present members and their cobeneficiaries.

The actuarial present value of accumulated plan benefits included in the Combined Statement of Accumulated Plan Benefits and Combined Statement of Changes in Accumulated Plan Benefits is presented according to Statement No. 35 of the Financial Accounting Standards Board.

The actuarial present value of accumulated plan benefits was calculated by the firm of Gabriel, Roeder, Smith & Company on the basis of the "accrued benefit" cost method. The resulting amount adjusts accumulated plan benefits to reflect the time value of money (through discounts for interest) and the probability of payment (using adjustments for death, disability, withdrawal and retirement) between the valuation date and the expected date of payment. The significant actuarial assumptions underlying the actuarial calculations for the years ended December 31, 1991 and 1990, are as follows:

Actuarial	Assumptions
-----------	-------------

Investment return

Average retirement age

Men

Women
Life expectancy

7.5% compounded annually

Ranging from 60 to 65

Ranging from 60 to 65

1971 Group Annuity Male and Female Mortality Tables

projected to 1984

These assumptions are based on the presumption that PERA will continue as a going concern. If the Association were to terminate, different actuarial assumptions and other factors might be applicable in determining the actuarial present value of accumulated plan benefits.

Unfunded Actuarial Accrued Liability

Contributions made to the divisions are determined by a statutorially defined rate. The adequacy of statutory rates is tested by means of annual actuarial valuations. The current contribution rates are sufficient to fully fund the cost of benefit commitments made to members. That is, they satisfy normal cost requirements (cost of service this year) and are expected to fund the unfunded portion of the actuarial accrued liability ("UAAL") over a reasonable period of future years. Contributions for December 31, 1991 and 1990, were as follows:

	Contri	butions
	1991	1990
Contributions made by:		
Employers	\$ 278,933	\$ 265,115
Members	242,588	225,651
Total contributions	\$ 521,521	\$ 490,766
Contributions consisted of:		
Normal cost	\$ 471,169	\$ 434,730
Amortization of the UAAL	50,352	56,036
Total contributions	\$ 521,521	\$ 490,766
Amortization periods computed to fund UAAL	16 to 31 years	19 to 28 years

(In Thousands of Dollars)

The UAAL is arrived at by reducing the total actuarial accrued liability by PERA plan assets on an historical cost basis. Future salary increases are included in the calculation.

For purposes of the contribution rate calculation, the unfunded actuarial accrued liability for the various divisions as of December 31, 1991 and 1990, were as follows:

	Unfunded Actuaria	A Accrued Liability
	1991	1990
State	\$ 564,172	\$ 581,920
School	430,104	459,656
Municipal	14,477	29,957
Judicial	4,396	5,038
Total	\$1,013,149	\$1,076,571

Property and Equipment

Property and equipment are carried at cost, less accumulated depreciation. Costs of major additions and improvements are capitalized. Expenditures for maintenance and repairs are charged to operations as incurred. Depreciation is calculated using the straight-line method, with estimated lives ranging from 3 to 50 years.

Federal Income Tax Status

PERA is exempt from federal income taxes under the Internal Revenue Code.

NOTE 3 - OTHER POST-EMPLOYMENT BENEFITS

Cost of Living Stabilization Fund Benefits

The Cost of Living Stabilization Fund ("CLSF") was established in 1980 to offset inflation by providing increased benefits payable to benefit recipients of the Association. Under the program, the CLSF pays a benefit which is based on a percentage of the PERA initial benefit. The CLSF benefit increase amount is paid monthly and the percentage increases have been approved by the Colorado General Assembly, every other year on even numbered years.

The CLSF is advance funded, but not under an actuarially determined basis, by employer contributions equal to 2 percent of member salaries. In 1991, the CLSF received \$60,618 in contributions from employers. Also in 1991, the CLSF recognized \$51,153 of benefits paid. The net assets of the CLSF at December 31, 1991 and 1990, totaling \$93,490 and \$70,911, respectively, are included in net assets available for benefits presented in the Combined Statement of Net Assets Available for Benefits.

Health Care Benefits

The Health Care Fund ("HCF") was established in 1985 to provide a premium subsidy for health care to PERA benefit recipients who are eligible and choose to enroll in PERA's Health Care Program (the "Program"). The Colorado General Assembly approves the subsidy amount, which is provided monthly. In 1991, the HCF paid up to a fixed dollar amount and the benefit recipient paid the remaining portion of the premium. In 1991 and 1990, the maximum subsidy was \$115 for benefit recipients whose retirement benefits were based on 20 years or more of service credit. For those with less service credit, the subsidy was reduced by 5 percent (\$5.75) for each year under 20 years.

The Board has the authority to contract, self-insure and make disbursements necessary to carry out the purposes of the Program. In 1991, PERA contracted with a major medical indemnity carrier to administer claims for self-insured plans, and with Health Maintenance Organizations providing services within Colorado.

The HCF is advance funded, but not under an actuarially determined basis, by employer contributions equal to 0.8 percent of member salaries. In 1991, the HCF received \$24,512 in contributions from employers, and \$12,496 in payments made by benefit recipients for their portion of PERA's self-insured plans. Also in 1991, the HCF recognized \$35,540 of benefits paid. The reserve for future post-employment health care benefits as of December 31, 1991 and 1990, totaled \$61,080 and \$49,437, respectively. The future projected liability of claims on the HCF was \$575,057 as of December 31, 1991, as calculated by PERA's consulting health care actuary.

NOTE 4 - GUARANTEED INVESTMENT CONTRACTS

Since 1988, PERA has purchased 13 guaranteed notes issued by various insurance companies at a cost of \$410,000, earning interest at rates ranging from 8.21 to 9.44 percent, guaranteed through varying maturities in 1993, 1994 and 1995. Their current contract value is \$505,602.

As with other investments, PERA bears the risk of recovery should the issuers be unable to redeem the notes when due. The insurance firms issuing the 13 notes are rated as high quality by Moody's Investor's Service for issuers of guaranteed investment contracts.

(In Thousands of Dollars)

NOTE 5 - INVESTMENTS

Investment Authority

Under Colorado Revised Statute 24-51-206, as amended, the Board has complete responsibility for the investment of PERA's funds, with the following investment limitations:

- ☐ The aggregate amount of monies invested in corporate stocks or corporate bonds, notes or debentures which are convertible into stock or in investment trust shares cannot exceed 50 percent of the then book value of the fund.
- □ No investment of the fund in common or preferred stock (or both) of any single corporation can exceed 5 percent of the then book value of the fund.
- ☐ The fund cannot acquire more than 12 percent of the outstanding stock or bonds of any single corporation.

The above limitations and the fund's diversification over several asset classes reduce the overall investment risk exposure.

Cash and Short-Term Investments

The following table presents cash and short-term investments held by PERA as of December 31, 1991:

	Carrying Value	Bank Balance
Deposits (overdrafts) with banks (fully insured by federal depository insurance) Money market funds held at bank (fully collateralized	\$ (8,997)	\$ 2,851
by the underlying securities, held by PERA's agent in PERA's name)	282,697	282,697
Total cash and short-term investments	\$273,700	\$285,548

The differences between carrying values and bank balances are due to outstanding checks and deposits not yet processed by the bank.

Other Investments

The following table presents the remaining investments held by PERA at December 31, 1991, categorized to give an indication of the level of risk assumed by PERA. The categories are:

- (1) Insured or registered securities which are held by PERA or its agent in PERA's name.
- (2) Uninsured and unregistered, collateralized with securities held by the counterparty's trust department or agent in PERA's name.
- (3) Uncollateralized.

Investments in real estate cannot be categorized because securities are not used as evidence of the investment.

	Category				
	1	2	3	Amortized Cost	Fair Value
U.S. Government obligations	\$1,453,273	_	_	\$1,453,273	\$1,547,775
Domestic corporate bonds	2,208,232	_	_	2,208,232	2,321,784
Domestic stocks	3,367,621	_		3,367,621	4,219,431
International stocks	1,263,515		_	1,263,515	1,369,101
International fixed income	200,759	_	_	200,759	211,499
Guaranteed investment contracts	505,602	_	_	505,602	505,602
Fixed rate mortgages	306,465		_	306,465	267,039
Participating mortgages	95,931	_	_	95,931	96,228
Leveraged buyout funds	113,020	_		113,020	118,639
Venture capital funds	96,800	_		96,800	101,830
Municipal bonds	30,000		-	30,000	15,775
Subtotal	\$9,641,218	<u> </u>	<u>\$</u>	9,641,218	10,774,703
Non-categorized real estate				564,657	443,844
Total				\$10,205,875	\$11,218,547

Securities Lending

From time to time, PERA enters into various short-term agreements where investments are loaned to various brokers. These arrangements

(In Thousands of Dollars)

are collateralized by cash, letters of credit and marketable securities. They provide for the return of the investments and for a payment of a fee when the collateral is marketable securities or letters of credit, or interest earned when the collateral is cash on deposit. The securities on loan to the brokers are presented in the Combined Statement of Net Assets Available for Benefits at fair value.

At December 31, 1991, PERA had investments loaned with an aggregate fair value of \$997,287 and a total collateral value of \$1,018,100 or 102.09 percent of the total market value outstanding.

The loans are secured at all times by collateral at least equal to the market value of securities loaned. As with other extensions of credit, PERA may bear the risk of delay in recovery or even loss of rights in the collateral should the borrower of the securities fail financially.

NOTE 6 - COMMITMENTS AND CONTINGENCIES

At December 31, 1991, PERA was committed to the future purchase of investments at an aggregate cost of approximately \$379,659. Certain legal proceedings are pending against PERA arising from its normal activities which, based on the facts presently available and the advice of legal counsel, will not have (on settlement) an adverse impact on PERA's financial condition.

NOTE 7 - FUNDING STATUS AND PROGRESS

The amount shown below as "pension benefit obligation" is a standardized disclosure measure of the present value of pension benefits, adjusted for projected salary increases and estimated to be payable in the future as a result of current service credit.

The measure is the actuarial present value of credited projected benefits and is intended to help users assess PERA's funding status on a going-concern basis, assess progress being made in accumulating sufficient assets to pay benefits when due, and allow for comparisons among public employee retirement plans. This measure is independent of the actuarial funding method used to determine contributions to the Plan.

The pension benefit obligation was determined as part of an actuarial valuation of the Plan as of December 31, 1991 and 1990. Significant actuarial assumptions used in determining the pension benefit obligation include:

- ☐ A rate of return on the investment of present and future assets of 7.5 percent per year compounded annually.
- ☐ Projected salary increases of 5.5 percent per year compounded annually, attributable to inflation.
- ☐ Additional projected salary increases ranging from 0 to 7.4 percent per year depending on age, attributable to seniority/merit.
- Projected benefit increases of 3 percent per year after retirement.

At December 31, 1991 and 1990, assets in excess of pension benefit obligation, as determined in accordance with generally accepted accounting principles under Statement No. 5 of the Governmental Accounting Standards Board, *Disclosure of Pension Information by Public Employee Retirement Systems and State and Local Governmental Employers*, were as follows:

					Combin	ed Totals
	State	School	Municipal	Judicial	1991	1990
Pension benefit obligation:						
Retirees and beneficiaries currently						
receiving benefits	\$1,876,070	\$2,085,266	\$186,393	\$27,383	\$4,175,112	\$ 3,755,580
Terminated members not yet						
receiving benefits	45,797	68,238	6,182	336	120,553	110,651
Current members:						
Accumulated employee contributions						
including allocated investment income	701,315	959,452	104,826	8,983	1,774,576	1,584,257
Employer financed - vested	1,546,623	2,445,496	178,593	19,633	4,190,345	3,886,345
Employer financed - non-vested	63,061	58,239	9,200	1,038	131,538	119,156
Total pension benefit obligation	4,232,866	5,616,691	485,194	57,373	10,392,124	9,455,989
Net assets available for benefits,						
at fair value (net of CLSF assets)	4,448,104	6,342,885	595,304	62,096	11,448,389	9,506,158
Assets in excess of pension benefit obligation	\$ 215,238	\$ 726,194	\$110,110	\$ 4,723	\$1,056,265	\$ 50,169

NOTE 8 - SUBSEQUENT EVENTS

Effective January 1, 1992, several actuarial assumptions were changed to more accurately reflect economic conditions and results of an actuarial study of the membership as a whole. The actuarial assumption for investment return was increased from 7.5 to 8.5 percent. Also, the actuarial assumptions related to withdrawal rates, disability rates, retirement rates and mortality rates were adjusted based on PERA's experience from 1986 to 1990. All other actuarial assumptions remained the same.

(In Thousands of Dollars)

During the 1992 regular legislative session of the Colorado General Assembly, House Bill 1335 was passed. The passage of this bill led to several changes: (1) The annual increase changes from 3 to 4 percent of the initial benefit beginning in 1993; (2) the benefit formula for each year of service over 20 through 40 years changes from 1.25 to 1.5 percent of HAS beginning July 1992; (3) the State Division employer contribution rate is reduced to 5.6 percent of salary for May and June 1992, 10.6 percent for July 1992 through June 1993, and 11.6 percent thereafter; and (4) the School Division employer contribution rate is permanently reduced to 11.6 percent and the State Trooper member contribution rate is permanently reduced to 11.5 percent, both beginning in July 1992.

After analyzing the effect of these changes for 1991 and consulting with Gabriel, Roeder, Smith & Company, PERA determined that the calculation of the UAAL would have increased by approximately \$58,000 at December 31, 1991.

NOTE 9 - TEN-YEAR HISTORICAL TREND INFORMATION (UNAUDITED)

Historical trend information, designed to provide information about the progress PERA has made in accumulating sufficient assets to pay promised benefits, is presented in the Schedule of Funding Progress below. This schedule is not a required part of the basic financial statements, but is presented as supplementary information according to Statement No. 5 of the Governmental Accounting Standards Board.

Schedule of Funding Progress*

Expressing the net assets available for benefits as a percentage of the pension benefit obligation provides one indication of the Association's funding status on a going-concern basis. Analysis of this percentage over time indicates the financial strength of the system. Generally, the greater the percentage, the stronger the retirement system. Trends in pension benefit obligation in excess of assets and annual covered payroll are both affected by inflation. Expressing the assets in excess of inflation aids analysis of PERA's progress made in accumulating sufficient assets to pay benefits when due.

Fiscal Year	(1) Net Assets Avallable for Benefits**	(2) Pension Benefit Obligation	(3) Percentage Funded (1) ÷ (2)	(4) Pension Benefit Obligation in Excess of (Less Than) Assets (2) - (1)	(5) Annual Covered Payroll	Pension Banefit Obligation in Excess of (Less Than) Assets as a Percentage of Covered Payroll (4) ÷ (5)
1991						
State	\$4,448,104	\$4,232,866	105.08%	\$ (215,238)	\$1,313,048	(16.39)%
School	6,342,885	5,616,691	112.93%	(726, 194)	1,673,724	(43.39)%
Municipal	595,304	485,194	122.69%	(110,110)	210,725	(52.25)%
Judicial	62,096	57,373	108.23%	(4,723)	15,620	(30.24)%
Totals	\$ <u>11,448,389</u>	\$10,392,124	110.16%	\$(1,056,265)	\$3,213,117	(32.87)%
1990	\$9,506,158	\$9,455,989	100.53%	\$ (50,169)	\$2,912,712	(1.72)%
1989	\$9,361,998	\$8,580,346	109.11%	\$ (781,652)	\$2,755,113	(28.37)%
1988	\$7,941,163	\$7,863,928	100.98%	\$ (77,235)	\$2,642,686	(2.92)%
1987	\$6,994,675	\$7,210,454	97.01%	\$ 215,779	\$2,531,358	8.52 %
1986	\$6,654,457	\$6,223,736	106.92%	\$ (430,721)	\$2,409,384	(17.88)%

^{*} The information for this schedule is for 1986-1991 only; information for previous years is unavailable.

^{**} At fair value, excluding CLSF assets.

Schedule I – Combining Statement of Net Assets Available for Benefits

As of December 31, 1991, with Comparative Combined Totals for 1990

(In Thousands of Dollars)

Assets	State Division Trust Fund	School Division Trust Fund
	I GIIVI	E GILLE
Investments, at fair value:	\$ 592,503	\$ 845,308
U.S. Government obligations Domestic corporate bonds	888,801	1,268,028
Domestic stocks	1,615,238	2,304,416
International stocks	524,105	747.725
International fixed income	80,964	115,508
Guaranteed investment contracts.	193,549	276,133
Fixed rate mortgages	102,225	145,841
Real estate	169,908	242,403
Participating mortgages	36,837	52,555
Leveraged buyout funds	45,416	64,794
Venture capital funds	38.981	55,614
Municipal bonds	6,039	8,615
Total investments	4,294,566	6,126,940
Receivables:	20 707	25 242
Employers	20,707	25,342
Interest and dividends	41,237	58,830
Other	2,944	4,673
Total receivables	64,888	88,845
Cash and short-term investments	104,758	149,456
Property and equipment, at cost, net of accumulated		
depreciation of \$6,711 and \$5,164, respectively	-	
Total assets	4,464,212	6,365,241
Liabilities and Reserves		
Refunds payable and other	16,108	22,356
Reserves:		
Insurance dividend reserve		_
Health care fund		
Total reserves		
Total liabilities and reserves	16,108	22,356
Commitments and contingencies (Note 6)		=
Net assets available for benefits	\$ 4,448,104	\$6,342,885

The assets and liabilities of the Combined Investment Fund have been allocated to the trust funds on a pro rata basis.

Municipal Division Trust	Judicial Division Trust	Cost of Living Stabilization	Health Care	Common Operating	insurance Dividend		ned Totals
Fund	Fund	Fund	Fund	Fund	Reserve	1991	1990
\$ 79,278	\$ 8,245	\$ 11,808	\$ 8,582	\$ —	\$ 2,051	\$1,547,775	\$1,421,732
118,924	12,368	17,713	12,873		3,077	2,321,784	1,909,357
216,123	22,476	32,191	23,395		5,592	4,219,431	3,251,397
70,127	7,293	10,445	7,591	_	1,815	1,369,101	1,211,768
10,833	1,127	1,614	1,173	_	280	211,499	
25,897	2,693	3,857	2,803	_	670	505,602	463,854
13,679	1,422	2,037	1,481	_	354	267,039	300,654
22,734	2,364	3,386	2,461	_	588	443,844	485,874
4,929	513	734	532	_	128	96,228	87,430
6,077	632	905	658		157	118,639	75,964
5,216	542	777	565	_	135	101,830	70,378
808	85	120	87		21	15,775	12,250
574,625	59,760	85,587	62,201		14,868	11,218,547	9,290,658
2,784	505	*******	15	_	_	49,353	45,659
5,518	574	822	597	_	143	107,721	87,976
536	11	5,292	4,647	(15,449)	102	2,756	2,152
8,838	1,090	6,114	5,259	(15,449)	245	159,830	135,787
14,017	1,458	2,088	1,517	43	363	273,700	213,114
				15,645		15,645	16,315
597,480	62,308	93,789	68,977	239	15,476	11,667,722	9,655,874
2,176	212	299	7,897	239	883	50,170	15,597
_	_	_		_	14,593	14,593	13,771
			61,080			61,080	49,437
			61,080		14,593	75,673	63,208
2,176	212	299	68,977	239	15,476	125,843	78,805
		_			_	_	
\$ 595,304	\$ 62,096	\$ 93,490	<u>\$</u>	<u> </u>	\$ <u> </u>	\$11,541,879	\$9,577,069

Schedule II - Combining Statement of Changes in Net Assets Available for Benefits

For the Year Ended December 31, 1991, with Comparative Combined Totals for 1990

(In Thousands of Dollars)

	State Division Trust Fund	School Division Trust Fund
Investment income: Realized gains (losses) on investments	\$ 104,742 163,657 54,132 352,971 11,426 11,031	\$ 150,482 235,125 77,772 507,217 16,416 15,848
Total investment income	697,959	1,002,860
Contributions: Employers Members Retiree health care premiums Purchased service Total contributions	141,456 111,081 — 3,414 255,951	121,016 114,237 — 6,534 241,787
	233,931	241,707
Transfers: Benefits paid to retirees Benefits paid to survivors Benefits paid to health care participants. Refunds of contribution accounts	(179,353) (5,992) — (14,005)	(190,437) (4,935) — (11,113)
Other, net	25,661	21,200
Total transfers	(173,689)	(185,285)
Administrative expenses	(4,559)	(6,607)
Net (Increase) decrease in insurance dividend reserve, net of administrative fees		
Net (increase) decrease in reserve for health care fund		
Net Increase	775,662	1,052,755
Net assets available for benefits: Beginning of year	3,672,442	5,290,130
End of year	\$ 4,448,104	\$6,342,885

^{*} Employer contributions into this fund are as follows: State, \$24,557; School, \$31,566; Municipal, \$4,208; Judicial, \$287.

The investment income of the Combined Investment Fund has been allocated to the trust funds on a pro rata basis.

^{**} Employer contributions into this fund are as follows: State, \$9,823; School, \$12,627; Municipal, \$1,947; Judicial, \$115.

^{***} Transfers from this fund are as follows: State, \$(24,940); School, \$(23,913); Municipal, \$(1,871); Judicial, \$(429).

Municipal Division Trust	Judicial Division Trust	Cost of Living Stabilization	Health Care	Common Operating	Insurance Dividend	Combi	ned Totals
Fund	Fund	Fund	Fund	Fund	Reserve	1991	1990
\$ 14,016	\$ 1.468	\$ 1,968	6 4 535		4 274	¢ 274 F7F	* 40.54
21.899	\$ 1,468 2,294	3.075	\$ 1,525 2,383	\$ —	\$ 374 584	\$ 274,575 429,017	\$ (10,564) 411,835
7,244	759	1,017	788	_	555	142,267	132,237
47,233	4,955	6,632	5,152		1,276	925,436	(619,110)
1,529	160	215	166		41	29,953	28,089
1,476	155	207	161	_	39	28,917	67,076
93,397	9,791	13,114	10,175		2,869	1,830,165	9,563
14,707	1,754	60.618*	24,512**			364,063	340,786
16,127	1,143	00,018	24,512	_		242,588	225,651
-	- 1,145		12,496	_	_	12,496	6,063
450	14	_	-	_		10,412	6,312
31,284	2,911	60,618	37,008			629,559	578,812
(15,953)	/2 793)					(200 524)	(3.40.03.4)
(13,933)	(2,783) (264)	_	_	_	_	(388,526)	(349,931)
(921)	(204)	_	(35,540)	_	_	(12,118)	(11,363)
(3,176)	(85)		(33,340)	_	_	(35,540) (28,379)	(29,948) (32,621)
(16)	429	(51,153)***	=	1,353	(2,046)	(4,572)	(6,217)
(20,072)	(2,703)	(51,153)	(35,540)	1,353	(2,046)	(469,135)	(430,080)
(758)	(36)		_	(1,353)		(13,313)	(11,381)
				_	(823)	(823)	1,800
			(11,643)			(11,643)	2,632
103,851	9,963	22,579	_	_	_	1,964,810	151,346
491,453	52,133	70,911	_	_	_	9,577,069	9,425,723
\$ 595,304	\$ 62,096	\$ 93,490	\$ <u> </u>	\$ <u> </u>	\$ _	\$11,541,879	\$9,577,069

Schedule III - Combining Statement of Accumulated Plan Benefits

As of December 31, 1991, with Comparative Combined Totals for 1990

(In Thousands of Dollars)

	State Division Trust Fund
Actuarial present value of accumulated plan benefits:	
Vested benefits:	
Benefit recipients	\$1,876,070
Other members	1,549,739
Total vested benefits	3,425,809
Non-vested benefits	365,882
Total actuarial present value of accumulated plan benefits	\$3,791,691

Schedule IV - Combining Statement of Changes in Accumulated Plan Benefits

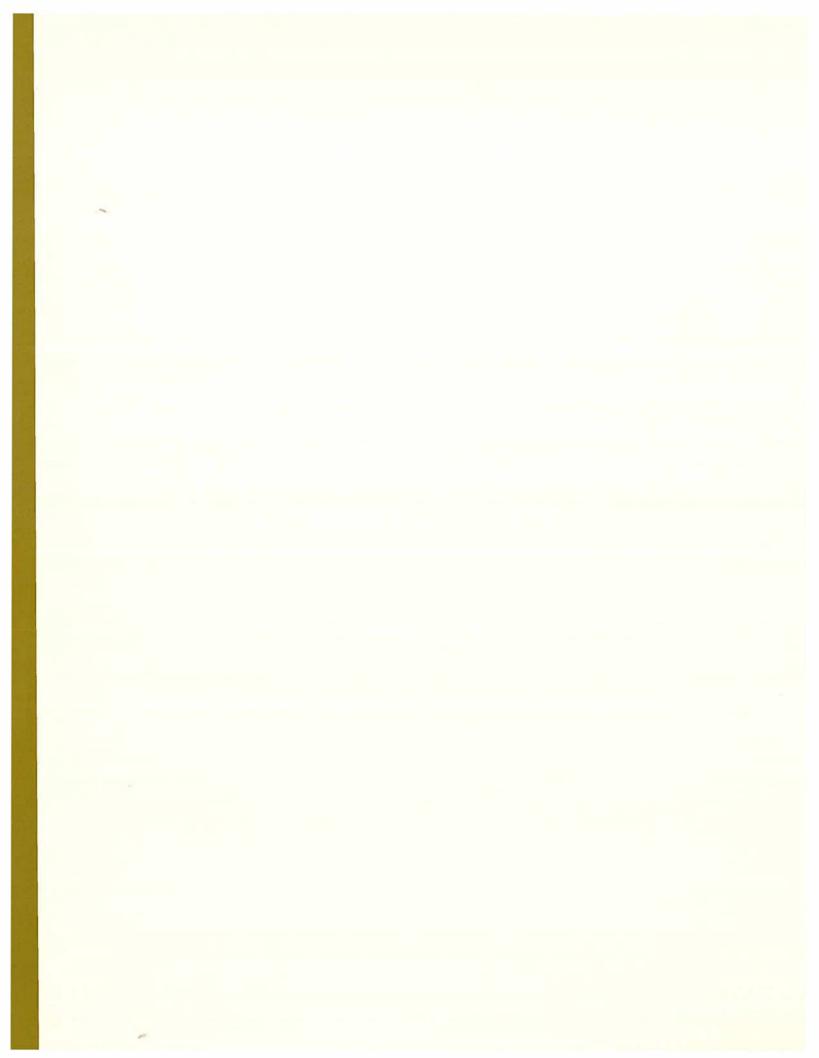
For the Year Ended December 31, 1991, with Comparative Combined Totals for 1990

(In Thousands of Dollars)

	State Division Trust Fund
Actuarial present value of accumulated plan benefits at beginning of year	\$3,465,816
Benefits accumulated and interest amortization, net of refunds	511,220
Benefits paid	(185,345)
Actuarial present value of accumulated plan benefits at end of year	\$3,791,691

School Division Trust	Municipal Division Trust	Judicial Division Trust	Combin	ed Totals
Fund	Fund	Fund	1991	1990
\$2,085,266 2,297,148	\$186,393 184,874	\$27,383 18,018	\$4,175,112 4,049,779	\$3,755,580 3,686,718
4,382,414	371,267	45,401	8,224,891	7,442,298
320,509	50,992	6,215	743,598	667,662
\$4,702,923	\$422,259	\$51,616	\$8,968,489	\$8,109,960

School Division Trust	Municipal Division Trust	Judicial Division Trust	Combine	ed Totals
Fund	Fund	Fund	1991	1990
\$4,212,156	\$385,903	\$46,085	\$8,109,960	\$7,260,801
686,139 (195,372)	53,236 (16,880)	8,578 (3,047)	1,259,173 (400,644)	1,210,453 (361,294)
\$4,702,923	\$422,259	\$51,616	\$8,968,489	\$8,109,960





SUPPORTING SCHEDULES
FOR FINANCIAL SECTION*

*UNAUDITED

Schedule of Administrative Expenses

For the Years Ended December 31, 1991 and 1990

	1991	1990
Personnel services:		
Salaries	\$ 5,784,407	\$ 5,115,711
Employee benefits	1,515,797	1,369,756
Total personnel services	7,300,204	6,485,467
Staff education:		
Tuition assistance program	159,495	86,688
PERA-required education	262,562	238,835
Other	558	2,038
Total staff education	422,615	327,561
Professional contracts:		
Actuarial contracts	212,900	96,550
Audits	94,790	115,488
Medical exams	235,587	157,892
Investment counsel	91,422	87,151
Legal and legislative counsel	509,766	325,962
Computer services and consulting	523,188	314,480
Management consulting	145,048	197,887
Health care consultants	141,513	134,925
Other	35,779	101,560
Total professional contracts	1,989,993	1,531,895
Miscellaneous:		
Equipment rental & services	449,337	430,976
Memberships	65,950	79,971
Publications & subscriptions	49,861	36,990
Travel and local expense	268,269	285,945
Board fiduciary expense	98,600	203,743
	14,071	14.034
Auto expense		
Telephone	104,133	94,856
Postage	471,931	373,386
Insurance	83,224	124,515
Printing	304,916	252,717
Office supplies	226,636	299,957
Building rent, supplies & utilities	263,891	253,788
Other	35,695	28,228
Total miscellaneous	2,436,514	2,275,363
Total budgeted expense	12,149,326	10,620,286
Depreciation expense	1,357,427	880,533
Total expense	13,506,753	11,500,819
Interfund transactions	(193,764)	(119,997)
Total administrative expense	\$ 13,312,989	\$11,380,822
Allocation of administrative expense:		
State Division	\$ 5,073,580	\$ 4,370,983
School Division	7.355,426	6,256,715
Municipal Division.	844,044	718,804
Judicial Division	39,939	34,320
Total allocation	\$ 13,312,989	\$11,380,822

Schedule of Cash Receipts and Disbursements

For the Years Ended December 31, 1991 and 1990 (In Thousands of Dollars)

	1991	1990
Cash balance at beginning of year	\$ (9,247)	\$ (2,940)
Add cash receipts:		
Contributions:		
Members	242,588	225,651
Employers	364,063	340,786
Health care fund	12,496	6,063
Investment income	875,812	561,597
Other receipts	5,839	
Total cash receipts	\$1,500,798	\$1,134,097
Less cash disbursements:		
New investment purchases	\$1,022,672	\$ 705,254
Benefit payments	436,184	391,148
Refunds	28,379	32,621
Administrative expenses	13,313	11,381
Total cash disbursements	\$1,500,548	\$1,140,404
Cash balance at end of year	\$ (8,997)	\$ (9,247)





INVESTMENTS SECTION*

*UNAUDITED

PERA Investment Policy Summary

Goal:

The function of the Public Employees' Retirement Association is to provide present and future retirement or survivor benefits for its members. In keeping with that function, the preservation of capital is of paramount importance.

The future investment performance of the fund directly affects its future financial strength. Earnings of portfolio assets in excess of the assumed actuarial rate of return reduce unfunded actuarial liabilities. However, the greater the expected return the higher the risk, and thus, the greater the volatility of expected returns.

Policy:

The fund is long-term in nature and the selection of investments is regulated by: statutory limitation, investment time horizon, the limits of acceptable risk and the objective of optimizing the total rate of return. Approval of all purchases and sales of investments is vested by law in the PERA Board of Trustees. The Deputy Executive Director of Investments is authorized to execute investment transactions on behalf of the Board.

Investment decisions shall be made under the framework of the goal established for the rate of return, limits of acceptable risk and fund objectives. The goal is to optimize the return of the portfolio, as opposed to maximizing the rate of return.

The optimal portfolio mix is one that carefully equates expected rate of return with expected risk of all investment categories utilized in the portfolio. In setting the optimal mix of assets for the portfolio, the Board has developed a strategic (long-term) asset allocation policy which incorporates a diversified asset mix.

The targeted strategic asset allocation is designed to provide an optimal diversification, in order to reduce risk and maximize total rate of return relative to risk. Since the investment time horizon of the portfolio is long-term, and the portfolio is constructed to avoid the necessity of liquidating holdings to meet benefit payments, liquidity is not a first consideration. However, every reasonable effort will be made to provide protection for the portfolio in future deteriorating markets.

The Board recognizes that individual investment holdings contain substantially higher risk than portfolios constructed of such holdings. Consequently, primary emphasis will be given to diversification of the portfolio on an optimal basis, utilizing the diversified strategic asset allocation mix.

While efforts can be made to maintain the quality of individual holdings, it is recognized that the utilization of certain non-traditional asset categories such as venture capital and leveraged buyout funds, international equities, guaranteed investment contracts and real estate may contain substantially higher risk than

with individual issues. Consequently, primary effort will be made to reduce the risk of the total portfolio through optimal diversification, as opposed to concentrating on individual issues.

The portfolio will be managed by a carefully constructed mix of internal and external management. No holding will be considered a "permanent" part of the portfolio. Any security can be sold at any time either to increase gains or decrease losses.

The targeted strategic asset allocation is designed to provide the optimal mix of asset categories over the investment time horizon of the portfolio. In doing so, characteristics of expected return, risk and correlation of return of the various asset categories have been carefully projected. Both traditional (cash, bonds, domestic stocks, fixed income, mortgages) and non-traditional (real estate, guaranteed investment contracts, international investments, including stocks and fixed income, and other alternative investments) will be incorporated into the targeted strategic asset mix.

Preference will be given to Colorado investments, all other things being equal. However, in order to provide optimal portfolio diversification by geographical location and asset categories, and to maintain fiduciary responsibility, investments located within Colorado shall not exceed 20 percent of the aggregate (combined) portfolio at cost. Within the 20 percent limitation, every effort will be made to further diversify the available asset classes (commercial real estate mortgages, common stock holdings, corporate debt, equity ownership of real estate, residential mortgage pools and venture capital).

In making investment decisions, the Board shall avail itself to the highest caliber advice obtainable both internally and externally. This advice may include the internal investment staff, outside investment managers selected for both traditional and non-traditional asset classes, and investment consultants selected by the Board for specific expertise in implementing and carrying out the portfolio process.

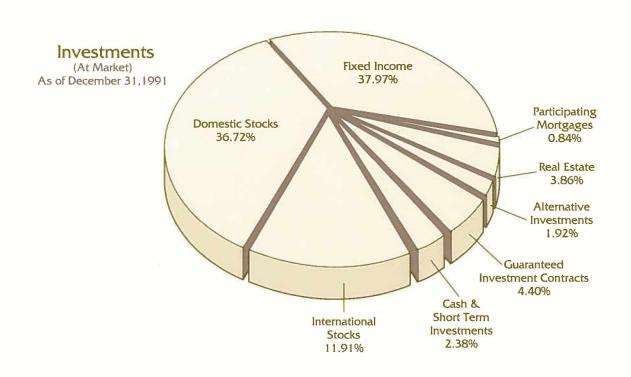
Generally accepted accounting principles (GAAP) will be followed in accounting for the portfolio, however, GAAP should not restrict investment decisions. Securities recorded at original cost, adjusted cost and market value will be reported to the Board. The firm engaged for the annual audit shall be consulted when questions concerning accounting procedures arise. An annual evaluation shall be conducted by a performance evaluation service from the investment industry.

In addition, the annual external audit and the annual actuarial evaluation shall be reviewed in conjunction with evaluation of investment performance. All evaluations will be related to the Association's stated goals. Because these goals are long-term, cumulative performance results will be considered as more important than performance in any one year.

Investment Summary

(In Thousands of Dollars)

	January	1, 1991	Decembe	er 31, 1991	
Type of Investment	Amortized Cost	Market Value	Amortized Cost	Market Value	% Total Market
Cash & short-term investments	\$ 210,078	\$ 213,114	\$ 268,262	\$ 273,700	2.38%
Fixed Income:					
U.S. Government obligations	1,435,818	1,421,732	1,453,273	1,547,775	13.47%
Municipal bonds	30,000	12,250	30,000	15,775	0.14%
Domestic corporate bonds	1,922,332	1,909,357	2,208,232	2,321,784	20.20%
Mortgages	357,744	300,654	306,465	267,039	2.32%
International fixed income			200,759	211,499	1.84%
Total fixed income	3,745,894	3,643,993	4,198,729	4,363,872	37.97%
Domestic stocks	3,026,319	3,251,397	3,367,621	4,219,431	36.72%
International stocks	1,233,095	1,211,768	1,263,515	1,369,101	11.91%
Real estate	524,527	485,874	564,657	443,844	3.86%
Participating mortgages	87,430	87,430	95,931	96,228	0.84%
Guaranteed investment contracts	463,854	463,854	505,602	505,602	4.40%
Alternative investments:					
Venture capital funds	67.820	70.378	96.800	101.830	0.89%
Leveraged buyout funds	80,995	75,964	113,020	118,639	1.03%
Total alternative investments	148,815	146,342	209,820	220,469	1.92%
Total investments	\$9,440,012	\$ 9,503,772	\$10,474,137	\$11,492,247	100.00%



Fund Performance Evaluation

Evaluation

PERA retains R.V. Kuhns & Associates to evaluate its fund performance. In the analysis, R.V. Kuhns includes all investments within the portfolio, including cash and accrued income. They also make the calculations using post-closing amounts for annual rates of return.

Asset Allocation

As of December 31, 1991, the fund was well diversified and in line with the Association's strategic asset allocation policy. Over the last five years, the fund has averaged 43.4 percent in stocks (domestic and international), 39.9 percent in bonds, 5.5 percent in cash and short-term investments and 11.3 percent in other assets.

During 1991, assets (at market value) were allocated within the following ranges: stocks, 45.7 to 48.4 percent; bonds, 41.2 to 44.4 percent; cash and short-term investments, 1.1 to 3.5 percent; and other assets, 7.4 to 9.5 percent.

Total Portfolio Results

For the year ended December 31, 1991, the total fund had a positive rate of return of 20.1 percent, which is in line with the Median Public Fund return of 20.4 percent. The Association's annualized rate of return over the last 5 years was 10.4 percent, and over the last 10 years, the return was 13.9 percent.

The 20.1 percent return is PERA's highest return in the last five years. This can be attributed to a wide divergence of returns among economic sectors. Consequently, portfolio performance was significantly influenced by optimal diversification during this period.

Domestic Stocks

The 1991 rate of return for the domestic stock portfolio was 29.6 percent, compared to the Standard & Poor's 500 Index return of 30.6 percent. Stock prices surged in December following a cut in the discount rate. Although it is unclear what the long-term effects of the rate cut will be on corporate investing, analysts expect that lower interest-related charges (especially mortgages)

incurred by customers should help to stimulate personal consumption.

In 1991, the PERA fund was restricted by law from investing more than 50 percent of its assets in the stock market at book value.

International Stocks

In 1991, PERA's international money managers continued to invest previously funded amounts in various international stocks. The benchmark by which these stocks are measured is the Europe-Australia-Far East (EAFE) Index. PERA's 1991 composite portfolio result for international stocks was 14.3 percent, which was above the EAFE benchmark of 12.9 percent.

Fixed Income

PERA fixed income performance is compared to the Shearson Lehman Bond Index. For 1991, the Association achieved a 16.9 percent rate of return, compared to the Shearson return of 16.1 percent. In four of the last five years, PERA bonds have performed at or above the Shearson Index.

The Federal Reserve's efforts to stimulate the economy by pushing interest rates lower, a modest rate of inflation, and the persistent sluggishness in the economy extended a bond rally through the fourth quarter.

Real Estate

PERA's real estate portfolio had a total return in 1991 of -7.5 percent, compared to the Institutional Property Consultants Index (IPC) return of -5.4 percent.

The income portion of the real estate portfolio has outperformed the IPC Index in four of the last five years. However in the late 1980s, the real estate market in Colorado experienced property devaluation (during this period, more than 50 percent of PERA's real estate was located in Colorado). In 1990 and 1991, national and worldwide economic and real estate recessions led to declining values in properties owned nationwide. PERA's total return over the last five years captures these devaluations. Future returns are expected to improve.

Average Percent of Asset Allocation

	1987	1988	1989	1990	1991	1991 Median Public Fund
Bonds	37.8%	37.7%	38.7%	42.6%	42.5%	48.2%
Cash and equivalents	5.8%	6.9%	7.8%	4.4%	2.6%	4.2%
Domestic stocks	42.2%	34.0%	28.7%	33.3%	34.2%	43.3%
International stocks	0.0%	7.6%	12.4%	12.1%	12.4%	0.0%
Other assets	14.2%	13.8%	12.4%	7.6%	8.3%	4.3%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Annual Rate of Return

						5–Year
	1987	1988	1989	1990	1991	Annualized
Total portfolio:						
PERA	2.9%	11.8%	17.2%	1.5%	20.1%	10.4%
Median Public Fund	3.6%	10.7%	17.6%	3.2%	20.4%	10.9%
Domestic stocks:						
PERA	6.9%	14.1%	30.5%	-3.1%	29.6%	14.9%
Standard & Poor's 500	5.2%	16.6%	31.5%	-3.2%	30.6%	15.3%
International stocks:						
PERA	N/A	N/A	16.4%	-15.4%	14.3%	4.0% ²
Europe-Australia-Far East Index (EAFE)	25.0%	28.6%	10.5%	-23.4%	12.9%	-1.5% ²
Fixed income:						
PERA	2.7%	8.3%	14.3%	7.6%	16.9%	9.8%
Shearson Lehman Bond Index	2.3%	7.6%	14.2%	8.3%	16.1%	9.6%
Real estate/participating mortgages:						
PERA total	3.2%	5.9%	-0.1%	-6.1%	-7.5%	-1.1%
Income return	5.7%	7.0%	6.2%	5.8%	6.4%	6.2%
Property value increase/decrease	-2.5%	-1.1%	-6.3%	-11.9%	-13.9%	-7.3%
Institutional Property Consultants						
Index total	6.2%	7.4%	5.7%	0.0%	-5.4%	2.7%
Income return	6.0%	5.4%	5.2%	4.9%	4.4%	5.2%
Property value increase/decrease	0.2%	1.9%	0.4%	-4.9%	-9.8%	-2.5%

¹⁹⁸⁹ was the first full year PERA invested in international equities.

Colorado Investment Profile

The Association continues to seek out high-quality Colorado investments. Total PERA investments in Colorado are valued at more than \$718 million, a decrease of \$22 million from 1990.

Commercial mortgages	\$124,900,000
Committed to future funding	45,000,000
Common stock of companies headquartered in Colorado	44,900,000
Corporate bonds and notes	168,100,000
Real estate	176,100,000
State and local bonds	15,800,000
Funds under management of Colorado companies	
(venture capital and stock managers)	143,830,000
Total	\$718,630,000

Investment Brokers

George K. Baum, & Co. Boettcher & Co., Inc.
Alex Brown & Sons Inc.
C. R. Baird
Dain Bosworth
Dean Witter Reynolds, Inc.
Dillon Read & Co.
Donaldson Lufkin & Jenrette
First Boston Corp.
Fuji Securities Inc.
Goldman Sachs & Co.
Hanifen Imhoff Inc.

Kidder Peabody & Co., Inc.
Lehman Brothers Inc.
Lynch Jones & Ryan
Merrill Lynch & Co., Inc.
Oppenheimer & Co., Inc.
Paine Webber Inc.
Pershing & Co.
Piper Jaffray Inc.
Prudential Securities Inc.
Salomon Brothers, Inc.
Smith Barney
Stifel Nicholaus & Co., Inc.

²Three-year annualized returns for 1989-1991.

Internally Managed Stocks

	Shares		Market
	Held	Cost	Value
Funds:			
Small Cap Equity Fund	5,095,482	\$ 90,608,957	\$ 127,396,656
S&P 500 Index Fund	43,359,948	1,544,956,965	1,993,554,710
Index Tilt Fund	15,758,550	599,727,950	742,722,897
Momentum Fund	1,147,566	26,148,899	31,935,198
Individual Stocks:			
Abbott Laboratories	216,800	\$ 3,664,579	\$ 14,932,100
Aetna Life & Casualty	198,800	7,452,813	8,747,200
Aluminum Company of America	148,000	9,413,479	9,527,500
American Express Co	428,200	10,400,679	8,778,100
American Telephone & Telegraph	250,000	9,499,370	9,781,250
Amoco Corp.	170,000	6,190,687	8,351,250
AMP Inc.	280,000	11,402,846	16,415,000
Anadarko Petroleum	275,000	7,560,188	6,600,000
Apache Corp	94,000	1,423,565	1,492,250
Apple Computer Inc.	180,000	8,789,999	10,147,500
Arkla, Inc.	700,000	14,481,604	8,750,000
Armco Inc.	600,000	2,907,781	3,225,000
Atlantic Richfield Co.	60,000	4,363,425	6,405,000
Avnet Inc.	230,000	6,024,034	6,238,750
Baker Hughes Inc.	600,000	15,832,149	11,550,000 5,745,600
Ball Corp. Banc One Corp.	151,200 245,000	4,705,185	12,893,125
Baroid Corp.	600,000	7,105,000 3,754,000	3,075,000
Becton Dickinson	70,000	4,726,224	4,795,000
BellSouth Corp.	100,000	4,502,209	5,175,000
Blockbuster Entertainment	500,000	5,853,622	6,000,000
Boeing Co.	175,000	9,241,750	8,356,250
Bowater, Inc.	200,000	4,676,871	4,375,000
Briggs & Stratton	53,900	1,871,283	2,378,338
Bristol-Myers Squibb Co.	151,700	5,911,440	13,387,525
Brown Group Inc.	150,000	3,717,895	3,806,250
Brush Wellman Inc.	588,900	8,466,932	7,876,538
CIGNA Corp.	162,500	7,507,140	9,932,813
Carpenter Technology Corp.	56,000	2,634,860	2,632,000
Carter-Wallace Inc.	16,000	872,948	1,970,000
Caterpillar Inc.	200,000	9,357,438	8,775,000
Chevron Corp.	150,000	7,230,097	10,350,000
Cincinnati Gas & Electric Co. (The)	360,000	10,989,263	14,445,000
Coca-Cola Company (The)	150,000	3,119,657	12,037,500
Commonwealth Edison Co.	320,000	10,512,586	12,760,000
COMPAQ Computer Corp.	200,000	7,098,109	5,275,000
Computer Associates International, Inc.	847,400	7,055,719	9,639,175
Consolidated Edison Co. of New York, Inc.	440,000	11,929,484	12,595,000
Consolidated Natural Gas Co.	350,000	16,453,285	15,050,000
Cooper Industries, Inc.	300,000	7,043,754 6,631,276	17,175,000 7,675,000
Cray Poscarch, Inc.	100,000 150,000	4,992,324	5,812,500
Cross (A.T.) Co.	200,000	5,037,000	5,125,000
Cross (A.T.) Co. Dana Corp.	200,000	6,762,311	5,550,000
The state of the s	240,000	7.938.431	9,510,000
Deluxe Corp. Dexter Corp.	300,000	6,532,833	6,487,500
Digital Equipment Corp.	150,000	8,748,399	8,287,500
Dominion Resources Inc.	120,000	5,883,700	6,840,000
Dover Corp.	150,000	5,791,248	6,262,500
Dow Jones & Co., Inc.	125,000	3,448,325	3,234,375
Dresser Industries, Inc.	731,000	9,916,475	14,711,375
Du Pont (E.I.) De Nemours & Co.	220,000	9,991,678	10,257,500
Dun & Bradstreet Corp.	200,000	9,508,897	11,500,000

Held Cost Value
Echlin Inc. 300,000 4,057,068 4,312,5 Ecolab Inc. 195,400 5,696,997 5,813,1 Emerson Electric Co. 200,000 5,701,234 11,000,0 Enserch Corp. 500,000 9,407,371 6,812,5 Entergy Corp. 230,000 5,552,502 6,813,7 Ethyl Corp. 500,000 14,784,529 14,000,0 Exabyte Corp. 119,718 2,169,889 3,771,1 Exxon Corp. 225,000 11,438,202 13,696,8 First Union Corp. 250,000 7,008,971 7,500,0 Ford Motor 250,000 7,090,128 7,031,2 GTE Corp. 300,000 8,889,321 10,387,5 General Electric Co. 110,000 5,985,319 6,825,0 General Electric Co. 110,000 6,931,100 8,415,0 General Motors Corp. 225,000 7,686,012 6,496,8 General Re Corp. 75,000 6,604,000 7,640,6 General Signal Corp 200,000 8,851,688 10,6
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International Business Machines Corp
Johnson & Johnson
Keystone International, Inc. 300,000 8,750,977 8,550,00
Knight-Ridder, Inc. 150,000 6,690,203 7,931,2
Laidlaw Inc. Cl-B Non-vtg. 290,000 6,273,071 2,537,50
Lilly (Eli) & Co
Lubrizol Corp
MCN Corp
Marsh & McLennan Cos., Inc. 150,000 11,391,374 12,206,2
Melville Corp. 150,000 5,147,359 6,675,0
Mentor Graphics Corp
Merck & Co., Inc
Minnesota Mining & Manufacturing Co. 50,000 2,723,714 4,762,50
Mobil Corp. 200,000 9,514,638 13,575,00 Morrison Knudsen Corp. 165,000 7,128,191 8,188,13
Nalco Chemical Co
Navistar International Corp. 1,000,000 3,499,031 2,625,0
Northern Telecom Ltd
Norwest Corp
Olin Corp. 177,000 8,480,098 7,146,3
Oregon Steel Mills, Inc
PPG Industries, Inc
PacifiCorp
Philip Morris Companies Inc
Public Service Co. of Colorado
Public Service Enterprise Group Inc
Raytheon Co. 100,000 8,332,424 8,312,50
Rite Aid Corp
Rohm & Haas Co
Royal Dutch Petroleum Co. 190,000 9,987,131 16,387,5
SCEcorp
Schering-Plough Corp. 110,000 6,585,176 7,232,50

	Shares Held	Cost	Market Value
Schlumberger Ltd.	112,000	\$ 7,564,720	\$ 6,986,000
Shared Medical Systems Corp.	325,000	6,673,444	6,946,875
Sherwin-Williams Co.	570,000	11,059,300	15,247,500
Snap-On Tools Corp.	225,000	7,476,942	7,284,375
Sonat, Inc.	300,000	15,465,641	9,900,000
Sundstrand Corp.	200,000	6,496,119	7,400,000
Syntex Corp.	315,000	7,856,143	15,198,750
Thomas & Betts Corp.	200,000	10,978,625	11,500,000
Times Mirror Co. (The)	110,000	3,338,450	3,410,000
Toys "R" Us, Inc.	370,000	6,568,346	12,117,500
Tyco Laboratories, Inc.	119,200	5,671,861	4,097,500
Union Camp Corp.	206,900	8,891,599	10,293,274
Union Pacific Corp.	287,200	9,683,390	14,862,600
U S WEST, Inc.	200,000	5,818,276	7,575,000
United Technologies Corp	225,000	10,490,240	12,206,250
United Telecommunications, Inc.	340,000	9,828,578	8,075,000
Unocal Corp.	200,000	3,329,060	4,675,000
Vulcan Materials Co.	110,000	4,180,176	3,960,000
Wachovia Corp. (New)	160,000	8,968,638	9,300,000
Washington Post Co.	19,000	4,234,055	3,695,500
Westinghouse Electric Corp.	320,000	8,061,892	5,760,000
Westvaco Corp.	150,000	5,092,902	5,925,000
Whirlpool Corp.	264,300	7,044,638	10,274,662
Williams Companies, Inc. (The)	450,000	16,890,624	17,268,750
Yellow Freight System, Inc. of Delaware	175,000	4,961,874	4,659,375
Total	99,767,564	\$3,291,150,684	\$4,113,732,303

Externally Managed Assets

Externally Mailageti Ass	CLS	
	Cost	Market Value
Domestic Stock Managers:		
Denver Investment Advisors	\$ 25,066,390	\$ 41,887,615
Janus Capital	23,327,984	36,861,519
United Capital	28,076,436	26,949,115
Total	\$ 76,470,810	\$ 105,698,249
International Stock Managers:		
Alliance Capital Management Corp.	\$ 258,110,729	\$ 267,742,544
Baring International Investment Ltd.	135,000,000	176,822,655
Brinson Partners Inc.	179,176,374	200,467,887
Dunedin Fund Managers Ltd.	105,150,065	104,853,037
Morgan Grenfell Capital Management Inc.	156,481,701	163,753,362
Nomura Capital Management	165,287,110	177,844,486
Philippe Investment Management Inc.	164,309,121	169,759,882
Schroder Capital Management International	100,000,000	107,857,636
Total	\$ 1,263,515,100	\$ 1,369,101,489
Domestic Bond Managers:		
Fischer Francis Trees & Watts	\$ 203,861,465	\$ 213,127,673
Hyperion Capital Management	33,104,944	33,124,250
LM Capital Management	24,468,368	25,489,530
NCM Capital Management	25,438,081	26,948,848
Total	\$ 286,872,858	\$ 298,690,301
International Bond Manager:		
Julius Baer Investment Management	\$ 200,758,949	\$ 211,499,485
Total Externally Managed Assets	\$ 1,827,617,717	\$ 1,984,989,524

ACTUARIAL SECTION*

*UNAUDITED



Report of the Independent Actuary

GABRIEL, ROEDER, SMITH & COMPANY
Actuaries & Consultants

200 Globe Building • 407 East Fort • Detroit, Michigan 48226 • 313-961-3346

May 14, 1992

The Board of Trustees
Public Employees' Retirement
Association of Colorado
1300 Logan Street
Denver, Colorado 80203

Ladies and Gentlemen:

The basic financial objective of PERA is to establish and receive contributions which, expressed as percents of active member payroll, will remain approximately level from generation to generation of Colorado citizens.

Progress toward this fundamental objective is measured by means of annual actuarial valuations which (i) determine present financial position, and (ii) test the adequacy of established contribution rates. The latest completed actuarial valuations were based upon data and assumptions as of December 31, 1991. Those valuations indicate that the contribution rates, established by statute for benefits then in effect, are consistent with the basic financial objective.

The actuarial valuations were based upon assumptions regarding future experience in various risk areas that were adopted by the Board in 1986 after consulting with the actuary. We believe those assumptions produce results which are reasonable.

The relationship between assumed experience and actual experience in each risk area is observed annually by an actuarial gain/loss analysis. Experience during 1991 was more favorable than assumed, primarily as the result of higher than assumed real rates of investment return.

Based upon the valuation results, it is our opinion that the Public Employees' Retirement Association of Colorado continues in sound condition in accordance with actuarial principles of level cost financing.

Respectfully submitted,

Brown B. Mulphy

Norman Luenes, F.S.A. Brian B. Murphy, F.S.A.

Actuarial Principles

Once vested in the Plan, each PERA member acquiring a year of service credit is, in effect, given an "IOU" by PERA which says: "The Public Employees' Retirement Association of Colorado owes the member one year of retirement benefits to be paid when the member retires." The law governing PERA financing intends that 1991 members and employers contribute the money to cover the IOUs being handed out in 1991. By following this principle, the contribution rates will remain approximately level from generation to generation.

An inevitable by-product of the level-cost design is the accumulation of reserve assets and investment income from those assets. Invested assets increase as contributions accumulate and income is earned. Investment income then becomes the third contributor for benefits and is directly related to the contribution amounts required from members and employers. The chart below depicts this level-cost design.

In actuarial terminology, this level-cost objective means that the contribution rates must total at least the current cost of the service being given this year and the interest on unfunded actuarial accrued liabilities (UAAL). UAAL is the difference between actuarial liabilities for service rendered and the accrued assets of PERA.

Computing Contributions to Support Fund Benefits

From a given schedule of benefits, and from the member and asset data furnished, the actuary determines the contribution rates to support the benefits by means of an actuarial valuation and funding method.

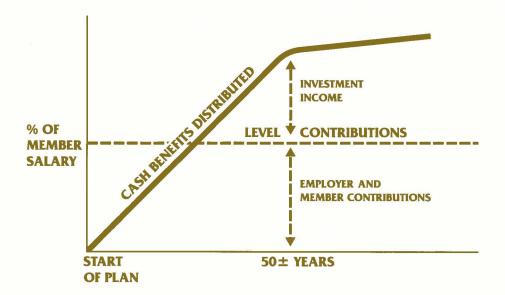
An actuarial valuation uses the rate of investment income which plan assets will earn, the rates of withdrawal of members who leave covered employment before qualifying for any monthly benefit, the rates of mortality, the rates of disability, the rates of salary increases and the assumed ages at actual retirement.

In making an actuarial valuation, assumptions must be made as to what the above rates will be for the next year and for decades in the future. Only the subsequent actual experience of the Plan can indicate the degree of accuracy of the assumptions.

Reconciling Differences Between Assumed and Actual Experience

Once actual experience has occurred and been observed, it will not coincide exactly with assumed experience, regardless of the wisdom of the assumptions or the skill of the actuary and the many calculations made. The future can be predicted with considerable precision (except for inflation), but not with 100 percent accuracy.

PERA copes with these changing differences by having annual actuarial valuations. Each actuarial valuation is a complete recalculation of assumed future experience, taking into account all past differences between assumed and actual experience.



Level Co. Zittions Line: Determining the level contribution line requires detailed assumptions concerning experiences in future decades, including: Rate of withdrawal of members (turnover), rates of mortality, rates of disability, ages at actual retirement, rates of pay increases, investment income and change in member group size.

Cash Benefits Distributed Line: This increasing line is the fundamental reality of retirement plan financing. As the ratio of retirees to members rises, the benefits paid rise as a percent of salary. The line increases over time, even if new benefits are not added, regardless of the financing method being followed.

Summary of Actuarial Assumptions

The following economic and non-economic actuarial assumptions were adopted by the Board of Trustees after consulting with the actuary, and were first used with the December 31, 1986, actuarial valuation. The assumptions are reviewed in depth every five years, and are established to make projections for the Plan's experience decades into the future. Assumptions will be changed in 1992 based on the results of the 1986 to 1990 experience study.

Economic Assumptions

The investment return rate used in making the valuations was 7.5 percent per year compounded annually (net after administrative expenses). The real rate of return is the portion of the total investment return which is more than the inflation rate. Considering other financial assumptions, the 7.5 percent investment return rate translates into an assumed real rate of return of 2 percent.

The overall member payroll is assumed to increase 5.5 percent annually. Pay increase assumptions for individual members are shown for sample ages in Exhibits A, B, C and D. Part of the assumption for each age is for a merit and/or seniority increase, and the other 5.5 percent recognizes inflation.

The number of members is assumed to continue at approximately the present number.

Non-Economic Assumptions

The 1971 Group Annuity Mortality Table, projected to 1984, was used in evaluating the cost of benefits to be paid. Related values are shown in Exhibit F.

The probabilities of age and service retirement are shown in Exhibit G.

The probabilities of withdrawal from service, disability and death-in-service are shown for sample ages in Exhibits A, B, C, D and E. For disability retirement, impaired longevity was recognized by basing benefit values on an adjusted age midway between attained age and normal retirement age. For other withdrawals, it was assumed that all members terminating before age 35 with less than five years of service, and 25 percent of members terminating after age 35 with over five years of service, would withdraw their contributions and forfeit their monthly benefits at retirement age.

The entry age normal actuarial cost method of valuation was used in determining liabilities and normal cost. Differences in the past between assumed experience and actual experience ("actuarial gains and losses") become part of the actuarial accrued liabilities. Unfunded actuarial accrued liabilities are amortized to produce payments (principal and interest) which are level percents of payroll contributions.

Employer contribution dollars were assumed to be paid in equal installments throughout the employer's fiscal year. Present assets (cash and investments) were listed at cost.

The data about persons now covered and about present assets were furnished by PERA's administrative staff. Although examined for general reasonableness, the data was not audited by the actuary. The actuarial valuation computations were made by or under the supervision of a Member of the American Academy of Actuaries (M.A.A.A.).

Separations From Employment Before Retirement and Individual Pay Increase Assumptions

Exhibit A — State Division

Percent of Members Separating Within the Next Year **Pay Increase Assumptions** for an Individual Member

	With	drawal	De	eath	Disa	ability	Merit &	Base	Increase
Sample Ages	Men	Women	Men	Women	Men	Women	Seniority	(Economy)	Next Year
STATE DIVISION ME	MBERS CO	NTRIBUTING 8	3%						
20	7.70%	11.00%	0.05%	0.02%	0.01%	0.01%	7.40%	5.50%	12.90%
25	7.70%	10.40%	0.06%	0.03%	0.04%	0.04%	5.00%	5.50%	10.50%
30	6.50%	9.50%	0.07%	0.04%	0.06%	0.05%	3.40%	5.50%	8.90%
35	5.00%	8.00%	0.10%	0.05%	0.20%	0.12%	2.20%	5.50%	7.70%
40	4.50%	5.90%	0.15%	0.08%	0.27%	0.19%	1.40%	5.50%	6.90%
45	4.50%	5.00%	0.27%	0.12%	0.43%	0.32%	0.90%	5.50%	6.40%
50	4.50%	5.00%	0.49%	0.18%	0.83%	0.76%	0.60%	5.50%	6.10%
55	4.50%	5.00%	0.78%	0.27%	1.12%	1.10%	0.50%	5.50%	6.00%
60	4.50%	5.00%	1.21%	0.46%	1.20%	1.20%	0.30%	5.50%	5.80%
65	4.50%	5.00%	1.95%	0.81%	1.20%	1.20%	%	5.50%	5.50%

Percent of Members Separating Within the Next Year **Pay Increase Assumptions** for an Individual Member

	_					101 401 11141171411411111111111111111111			
	With	drawal	De	eath	Disa	ability	Merit &	Base	Increase
Sample Ages	Men	Women	Men	Women	Men	Women	Seniority	(Economy)	Next Year
STATE DIVISION ME	MBERS CO	NTRIBUTING 1	2.3% (State	Troopers)					
20	7.94%	7.94%	0.05%	0.02%	0.06%	0.06%	7.40%	5.50%	12.90%
25	7.72%	7.72%	0.06%	0.03%	0.06%	0.06%	5.00%	5.50%	10.50%
30	7.22%	7.22%	0.07%	0.04%	0.06%	0.06%	3.40%	5.50%	8.90%
35	6.28%	6.28%	0.10%	0.05%	0.07%	0.07%	2.20%	5.50%	7.70%
40	5.15%	5.15%	0.15%	0.08%	0.10%	0.10%	1.40%	5.50%	6.90%
45	3.98%	3.98%	0.27%	0.12%	0.17%	0.17%	0.90%	5.50%	6.40%
50	2.56%	2.56%	0.49%	0.18%	0.31%	0.31%	0.60%	5.50%	6.10%
55	0.94%	0.94%	0.78%	0.27%	0.56%	0.56%	0.50%	5.50%	6.00%
60	0.09%	0.09%	1.21%	0.46%	1.19%	1.19%	0.30%	5.50%	5.80%
65	— %	%	1.95%	0.81%	%	— %	%	5.50%	5.50%

Exhibit B — School Division

Percent of Members Separating Within the Next Year **Pay Increase Assumptions** for an Individual Member

			- 0						
Withdrawa		drawal	Death		Disability		Merit &	Base	Increase
Sample Ages	Men	Women	Men	Women	Men	Women	Seniority	(Economy)	Next Year
20	6.40%	8.00%	0.05%	0.02%	0.02%	0.02%	5.00%	5.50%	10.50%
25	6.40%	8.00%	0.06%	0.03%	0.02%	0.02%	3.70%	5.50%	9.20%
30	5.60%	8.00%	0.07%	0.04%	0.02%	0.02%	2.70%	5.50%	8.20%
35	4.20%	6.30%	0.10%	0.05%	0.04%	0.04%	2.00%	5.50%	7.50%
40	3.50%	4.50%	0.15%	0.08%	0.10%	0.10%	1.40%	5.50%	6.90%
45	3.50%	4.00%	0.27%	0.12%	0.24%	0.20%	1.00%	5.50%	6.50%
50	3.50%	4.00%	0.49%	0.18%	0.49%	0.30%	0.80%	5.50%	6.30%
55	3.50%	4.00%	0.78%	0.27%	0.88%	0.57%	0.60%	5.50%	6.10%
60	3.50%	4.00%	1.21%	0.46%	1.42%	1.00%	0.40%	5.50%	5.90%
65	3.50%	4.00%	1.95%	0.81%	1.65%	1.00%	— %	5.50%	5.50%

Exhibit C — Municipal Division

Percent of Members Separating Within the Next Year Pay Increase Assumptions for an Individual Member

se Increase	Base	Merit &	bility	Disa	ath	De	drawal	With		
omy) Next Yea	(Economy)	Seniority	Women	Men	Women	Men	Women	Men	Sample Ages	
0% 12.90%	5.50%	7.40%	0.01%	0.01%	0.02%	0.05%	12.00%	8.00%	20	
0% 10.50%	5.50%	5.00%	0.04%	0.04%	0.03%	0.06%	12.00%	8.00%	25	
0% 8.90%	5.50%	3.40%	0.05%	0.06%	0.04%	0.07%	10.50%	8.00%	30	
0% 7.70%	5.50%	2.20%	0.12%	0.20%	0.05%	0.10%	9.00%	6.30%	35	
0% 6.90%	5.50%	1.40%	0.19%	0.27%	0.08%	0.15%	6.90%	4.50%	40	
0% 6.40%	5.50%	0.90%	0.32%	0.43%	0.12%	0.27%	5.30%	4.00%	45	
0% 6.10%	5.50%	0.60%	0.76%	0.83%	0.18%	0.49%	5.00%	4.00%	50	
0% 6.00%	5.50%	0.50%	1.10%	1.12%	0.27%	0.78%	5.00%	4.00%	55	
0% 5.80%	5.50%	0.30%	1.20%	1.20%	0.46%	1.21%	5.00%	4.00%	60	
0% 5.50%	5.50%	— %	1.20%	1.20%	0.81%	1.95%	5.00%	4.00%	65	
5	5.5 5.5 5.5 5.5	0.90% 0.60% 0.50% 0.30%	0.32% 0.76% 1.10% 1.20%	0.43% 0.83% 1.12% 1.20%	0.12% 0.18% 0.27% 0.46%	0.27% 0.49% 0.78% 1.21%	5.30% 5.00% 5.00% 5.00%	4.50% 4.00% 4.00% 4.00% 4.00%	45	

Exhibit D — Judicial Division

Percent of Members Separating Within the Next Year Pay Increase Assumptions for an Individual Member

	With	drawal	De	eath	Disa	ability
Sample Ages	Men	Women	Men	Women	Men	Women
30	4.90%	4.90%	0.07%	0.04%	0.06%	0.06%
35	4.40%	4.40%	0.10%	0.05%	0.07%	0.07%
40	3.60%	3.60%	0.15%	0.08%	0.10%	0.10%
45	2.80%	2.80%	0.27%	0.12%	0.17%	0.17%
50	2.00%	2.00%	0.49%	0.18%	0.31%	0.31%
55	1.30%	1.30%	0.78%	0.27%	0.56%	0.56%
60	1.00%	1.00%	1.21%	0.46%	1.19%	1.19%
65	 %	— %	1.95%	0.81%	%	%

Judicial Division pay increases are determined by the Colorado Legislature.

Exhibit E

Percent of Members With Less Than Five Years of Service Withdrawing from Employment Next Year

	Divi	Municipal sions g Troopers)	nool Islon	
Years of Service	Men	Women	Men	Women
0	25.00%	30.00%	30.00%	30.00%
1	15.00%	18.00%	18.00%	18.00%
2	12.00%	16.00%	14.00%	14.00%
3	10.00%	14.00%	10.00%	10.00%
4	8.00%	12.00%	8.00%	8.00%

Single Life Retirement Values

Based on 1971 Group Annuity Mortality Table Projected to 1984 and 7.5 Percent Interest

Exhibit F — State, School, Municipal and Judicial Divisions

	of \$	t Value 1.00 for Life	of \$1.0 the Fir Incre	t Value 00 Mo. st Year asing Yearly	Ехре	Future Life Expectancy (Years)		
Sample Attained Ages	Men	Women	Men	Women	Men	Women		
40	\$148.30	\$155.13	\$194.49	\$207.11	36.69	43.22		
45	142.21	151.24	183.78	199.50	32.01	38.41		
50	134.71	146.05	171.18	189.88	27.53	33.66		
55	125.72	139.18	156.74	177.86	23.28	28.99		
60	114.86	130.21	140.21	163.11	19.27	24.44		
65	102.12	118.98	121.85	145.70	15.55	20.09		
70	88.28	105.19	102.90	125.66	12.25	15.99		
75	74.58	89.73	84.92	104.45	9.49	12.33		
80	60.87	74.20	67.78	84.16	7.17	9.28		
85	49.24	59.13	53.73	65.36	5.43	6.78		

Percent of Eligible Members Retiring Next Year

Exhibit G

Retirement Ages	State Division	State Troopers	School Division	Municipal Division	Judicial Division
Under 55	— %	20%	— %	— %	— %
55	13%	20%	12%	13%	%
56	13%	20%	12%	13%	— %
57	13%	20%	12%	13%	— %
58	13%	20%	12%	13%	— %
59	13%	20%	12%	13%	— %
60	17%	20%	20%	17%	15%
61	17%	20%	20%	17%	10%
62	17%	20%	20%	17%	10%
63	17%	20%	20%	17%	10%
64	17%	25%	20%	17%	10%
65	40%	30%	60%	40%	40%
66	40%	25%	40%	40%	20%
67	40%	25%	50%	40%	20%
68	40%	25%	60%	40%	20%
69	40%	40%	80%	40%	20%
70	100%	100%	100%	100%	40%
71	100%	100%	100%	100%	60%
72 and over	100%	100%	100%	100%	100%

Schedule of Retirees and Survivors by Type of Benefit

December 31, 1991

	Number of Benefit		7	Type of Ben	efit		
Division	Recipients	1	2	3	4	5	6
State	16,188	12,633	2,675	85	730	65	936
School	18,232	15,458	1,906	44	713	111	1,699
Municipal	1,823	1,249	401	10	146	17	112
Judicial	179	143	16	0	19	1	8
Total	36,422	29,483	4,998	139	1,608	194	2,755

		Option	Surviving Cobene-	Surviving		
Division	1	2	3	4*	ficiary	Retiree
State	7,951	1,764	3,173	523	1,455	442
School	10,871	1,946	2,739	395	979	434
Municipal	711	233	402	59	204	41
Judicial	29	18	58	13	35	6
Total	19,562	3,961	6,372	990	2,673	923

Benefit Types: 1 — Age and service retirement.

2 — Disability retirement.

3 — Survivor payment—Option 3.

 4 — Survivor payment—children, spouse or dependent parent.

5 — Surviving spouse with deferred future benefit.

6 — Former member with deferred future benefit.

Option Selection:

Age and service retirees and disability retirees select an Option at retirement to provide death benefits. They are as follows:

1 — Single life benefit.

2 — Joint benefit with 1/2 to surviving cobeneficiary.

3 — Joint and survivor benefit.

4 — Joint benefit with 1/2 to either survivor: Surviving cobeneficiary — retiree has predeceased the cobeneficiary. Surviving retiree — cobeneficiary has predeceased the retiree.

*No longer offered to members retiring.

Schedule of Member Valuation Data

	Number of Members*	Annual Payroll	Average Annual Salary	% Increase In Average Pay
1982	92,076	\$1,802,596,767	\$19,577	8.77%
1983	92,346	1,923,936,063	20,979	7.16%
1984	94,766	2,091,707,220	22,072	5.20%
1985	98,345	2,270,948,105	23,092	4.62%
1986	99,977	2,409,384,090	24,099	4.36%
1987	100,808	2,531,357,702	25,110	4.20%
1988	103,064	2,642,686,201	25,641	2.10%
1989	105,377	2,755,113,097	26,145	2.00%
1990	106,898	2,912,712,448	27,248	4.22%
1991	132,311	3,213,117,152	24,285	5.62%**

^{*} Total of 359 employers in 1991.

^{**} After adjustment for inclusion of temporary, part-time, substitute and seasonal personnel after July 1, 1991.

Schedule of Retirees and Beneficiaries Added to and Removed from Benefit Payroll*

	Adde	ed to Payroll		Payroll	Payroll	—End of Year	Cost of Living	Average	Increase	
Year Ended	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	Stablilization Fund	Annual Benefits	In Average Benefits	
12/31/82	2,413	\$21,263,055	673	\$2,523,386	22,056	\$107,582,521	\$39,978,816	\$6,690	24.8%	
12/31/83	2,202	21,365,407	736	3,048,446	23,522	125,899,802	38,624,028	6,994	4.6%	
12/31/84	2,247	23,813,326	717	3,009,065	25,052	146,704,999	45,747,060	7,682	9.8%	
12/31/85	2,275	27,050,513	567	3,565,127	26,760	170,190,060	42,286,322	7,940	3.4%	
12/31/86	2,293	28,173,779	857	4,386,095	28,196	193,978,656	44,138,479	8,445	6.4%	
12/31/87	3,408	46,690,933	955	4,928,698	30,649	235,742,208	45,122,863	9,164	8.5%	
12/31/88	2,269	27,914,867	852	3,661,680	32,066	266,034,336	44,537,477	9,685	5.7%	
12/31/89	2,341	26,812,386	960	3,704,135	33,447	296,210,412	43,993,557	10,171	5.0%	
12/31/90	2,472	30,727,020	979	4,241,455	34,940	330,668,124	47,742,599	10,830	6.5%	
12/31/91	2,601	33,363,027	1,119	4,319,340	36,422	367,985,496	51,154,160	11,508	6.3%	

^{*}Numbers derived on an accrual basis.

Member-Retiree Comparison*

The number of persons receiving monthly retirement benefits has grown steadily in relation to membership. This trend will continue for many years into the future.

The level-cost financing principle is designed so that contribution rates will not have to be raised to meet benefit promises. The current

percentages of salaries should be sufficient to meet the increasing retirement payroll if the benefit provisions contained in the state law are not changed. The retirement benefit disbursements shown in the right-hand column include cost-of-living increases paid in years since 1970. Prior to 1981, figures are for years ended June 30.

Year	Number of Retirees on 12/31	Number of Member Accounts on 12/31**	Retirees as % of Members on 12/31	Total Benefits Paid – Year Ended 12/31
1940	93	3,715	2.5%	\$ 72,588
1945	171	5,585	3.1%	137,442
1950	280	11,853	2.4%	237,866
1955	747	21,185	3.5%	745,679
1960	1,775	33,068	5.4%	2,055,139
1965	3,631	49,701	7.3%	5,486,225
1970	6,308	65,586	9.6%	13,115,234
1975	11,650	84,781	13.7%	32,820,433
1980	17,301	96,473	17.9%	71,289,456
1985	24,842	101,409	24.5%	192,456,029
1986	26,217	104,460	25.1%	217,402,612
1987	28,657	107,116	26.8%	247,891,967
1988	30,025	110,295	27.2%	286,647,682
1989	31,466	111,652	28.2%	315,547,718
1990	32,955	115,350	27.4%	350,398,094
1991	34,481	146,818	23.5%	401,187,591

^{*} Numbers derived on a cash basis

^{**} Includes inactive members.

Members in Valuation

By Attained Age and Years of Service -- 12-31-91

State Division

Members included in the State Division valuation totaled 47,543 involving annual salaries totaling \$1,313,048,184.

			Years of Ser	vice to Valu	iation Date			Totals			
Attained Age	0-4	5-9	10-14	15-19	20-24	25-29	30+	No.	Valuation Payroll		
Under 20	278							278	\$ 1,111,368		
20-24	1,266	8						1,274	15,486,360		
25-29	2,862	434	19					3,315	65,163,672		
30-34	3,760	1,340	490	20				5,610	134,366,424		
35-39	6,017	1,797	1,238	461	7			9,520	220,818,348		
40-44	3,938	1,802	1,468	1,248	239	7		8,702	260,475,228		
45-49	2,714	1,392	1,137	1,057	755	246	8	7,309	235,619,328		
50-54	1,544	867	751	762	762	476	100	5,262	177,140,448		
55-59	876	486	530	524	546	379	138	3,479	118,019,928		
60	135	82	97	110	79	39	21	563	18,079,740		
61	127	68	75	80	68	38	18	474	15,415,488		
62	100	72	94	71	63	32	16	448	14,961,348		
63	76	45	51	54	33	31	9	299	8,701,500		
64	61	38	44	48	24	18	14	247	7,579,368		
65	59	39	33	40	18	20	12	221	6,794,568		
66	45	13	18	30	16	10	7	139	4,046,232		
67	37	16	17	15	11	6	7	109	2,766,048		
68	38	8	10	14	7	2	4	83	2,219,280		
69	33	5	10	6	9	5	3	71	1,720,332		
70+	79	13	11	19	9	2	7	140	2,563,176		
Totals	24,045	8,525	6,093	4,559	2,646	1,311	364	47,543	\$1,313,048,184		

The average age for State Division members (excluding State Troopers) was 42.3 years, and the average service was 7.5 years.

The average age for State Troopers was 40.0 years, and the average service was 12.3 years.

School Division

Members included in the School Division valuation totaled 75,408 involving annual salaries totaling \$1,673,724,288.

	-		Years of Ser	vic <mark>e to Val</mark> u	ation Date				Totals			
Attained Age	0-4	5-9	10-14	15-19	20-24	25-29	30+	No.	Valuation Payroll			
Under 20	276							276	\$ 897,156			
20-24	1,795	6						1,801	18,150,204			
25-29	4,551	480	9					5,040	83,828,436			
30-34	5,268	2,320	496	10				8,094	147,759,444			
35-39	9,263	2,312	2,270	551				14,396	247,676,844			
40-44	6,938	2,933	2,335	2,669	531			15,406	373,778,808			
45-49	4,446	2,394	2,059	1,862	1,884	273	1	12,919	350,534,040			
50-54	2,264	1,365	1,465	1,304	1,201	1,004	172	8,775	248,402,988			
55-59	1,422	702	909	923	624	483	233	5,296	136,540,572			
60	196	103	107	128	71	35	27	667	15,105,312			
61	91	80	79	116	53	31	19	569	12,876,492			
62	161	93	90	92	45	19	16	516	10,706,436			
63	120	50	57	58	31	17	16	349	6,917,796			
64	121	35	51	45	36	14	12	314	5,728,836			
65	95	41	37	28	24	12	13	250	4,766,868			
66	77	28	24	19	21	5	6	180	3,028,152			
67	75	22	18	20	7	6	4	152	2,372,208			
68	54	14	18	4	10	4		104	1,538,352			
69	52	1 1	8	6	4	3	4	88	1,060,356			
70+	142	27	21	12	10	3	1	216	2,054,988			
Totals	37,507	13,016	10,053	7,847	4,552	1,909	524	75,408	\$1,673,724,288			

The average age for School Division members was 42.4 years, and the average service was 7.6 years.

By Attained Age and Years of Service — 12-31-91

Municipal Division

Members included in the Municipal Division valuation totaled 9,105 involving annual salaries totaling \$210,724,592.

		Years of Service to Valuation Date							Totals
Attained Age	0-4	5-9	10-14	15-19	20-24	25-29	30+	No.	Valuation Payroll
Under 20	211							211	\$ 528,217
20-24	489	3						492	4,179,197
25-29	718	122	10					850	16,151,816
30-34	889	404	139	4				1,436	33,120,701
35-39	1,132	421	256	106	3			1,918	43,723,531
40-44	676	348	288	184	58	1		1,555	42,662,623
45-49	417	210	201	142	98	39		1,107	31,099,168
50-54	204	128	116	93	74	44	8	667	18,768,913
55-59	154	60	87	65	52	44	20	482	13,075,980
60	17	12	11	12	8	2	2	64	1,654,935
61	22	5	9	11	7	3	1	58	1,244,989
62	21	9	7	8	4	1	4	54	1,203,670
63	11	9	2	9	3	1	2	37	882,802
64	18	11	10	4	2		1	46	807,022
65	12	2	1	3	1		1	20	266,201
66	7	3	5	4		1		20	421,328
67	10	3	2	1	1		1	18	193,118
68	12	4	2					18	137,052
69	5	3	1	2	1			12	209,857
70+	29	3	6		1		1	40	393,472
Totals	5,054	1,760	1,153	648	313	136	41	9,105	\$ 210,724,592

The average age for Municipal Division members was 39.3 years, and the average service was 6.3 years.

Judicial Division

Members included in the Judicial Division valuation totaled 255 involving annual salaries totaling \$15,620,088.

			Years of Sei	vice to Valu	ation Date			Totals		
Attained Age	0-4	5-9	10-14	15-19	20-24	25-29	30 +	No.	Valu	uation Payroli
30-34 35-39	2 16	5	1			3.0		2 22	\$	34,824 1,117,572
40-44 45-49 50-54 55-59	21 10 7 5	17 20 9 2	11 22 12 7	4 7 13 7	1 3 5	f	1	53 60 44 28		3,183,900 3,804,852 2,745,096 1,782,912
60	2	2	1 1 3 3 2	1 2 2 1	1	2		9 4 5 7 4		632,604 272,160 367,188 382,272 234,804
65	1	1	2	2 1 1 2	1 2 1	1		1 3 5 4 1 3		72,000 220,500 301,260 285,528 76,500 106,116
Totals	67	58	66	43	15	5	1	255	\$	15,620,088

The average age for Judicial Division members was 50.0 years, and the average service was 10.2 years.

Solvency Test

The PERA funding objective is to be able to pay long-term benefit promises through contributions that remain approximately level from year to year as a percent of salaries earned by members. In this way, members and employers in each year pay their fair share for retirement service accrued in that year by PERA members. Occasionally rates are increased, but only to add or improve benefit provisions.

If the retirement system follows level contribution rate financing principles, the system will pay all promised benefits when due — the ultimate test of financial soundness.

A short-term solvency test is one means of checking PERA's funding progress. In a short-term solvency test, the retirement plan's present assets (investments and cash) are compared with: 1) Member contributions on deposit, 2) the liabilities for future

benefits to persons who have retired and 3) the liabilities for service already rendered by active members. In a system that has been following the discipline of level contribution rate financing, the liabilities for member contributions on deposit (liability 1) and the liabilities for future benefits to present retirees (liability 2) will be fully covered by present assets, except in rare circumstances.

In addition, the liabilities for service already rendered by members (liability 3) will be partially covered by the remainder of present assets. Generally, if the system has been using level contribution rate financing, the funded portion of liability 3 will increase over time. It is unusual for liability 3 to be fully funded.

The schedule below illustrates the progress of funding liability 3 of PERA, and is indicative of PERA's policy to follow the discipline of level contribution rate funding.

Total Actuarial Liabilities

Valuation Date	Member Contributions (1)*	Member Retirees and Portion of Valuation Covered by R				ion of Acturued Liabil by Reporte (2)	ities
12/31/82	\$ 752,901,555	\$1,261,240,932	\$2,527,282,001	\$3,199,623,171	100%	100%	46.9%
12/31/83	843,058,135	1,505,814,909	2,751,961,085	3,752,861,340	100%	100%	51.0%
12/31/84	937,173,328	1,753,309,252	3,084,444,755	4,393,831,995	100%	100%	55.2%
12/31/85	1,042,574,126	2,020,932,989	3,405,202,669	5,194,918,164	100%	100%	62.6%
12/31/86	1,160,217,971	2,216,934,541	3,771,614,184	6,247,694,817	100%	100%	76.1%
12/31/87	1,259,278,057	2,734,034,675	4,213,269,209	7,019,254,128	100%	100%	71.8%
12/31/88	1,381,638,915	3,084,669,583	4,411,273,368	7,775,426,015	100%	100%	75.0%
12/31/89	1,500,592,533	3,455,861,901	4,723,623,212	8,722,658,715	100%	100%	79.7%
12/31/90	1,635,129,849	3,842,084,802	5,076,877,515	9,477,521,126	100%	100%	79.0%
12/31/91	1,834,998,407	4,272,349,404	5,414,471,940	10,508,670,579	100%	100%	81.3%

^{*}Includes accrued interest on member contributions.

Summary of Unfunded Actuarial Accrued Liabilities

Unfunded actuarial accrued liabilities are the difference between actuarially calculated liabilities for service already rendered and the assets of the retirement fund. It is natural for unfunded liabilities to exist for PERA and other retirement plans.

The law governing PERA requires that these liabilities be financed systematically over future years. The period for amortizing unfunded actuarial accrued liabilities is currently under the 60-year limit specified in State law in all divisions of PERA. (The law requires that contribution rates be set at a level which, if actuarial experience matches plan assumptions, will pay off unfunded liabilities over 60 years or less.) The amortization periods have shown stability over the last decade.

Benefits to retirees are "fully funded," that is, assets reserved for benefits currently being paid equal liabilities for those benefits. Liabilities for members are based on service rendered toward their retirement benefits which will be payable in the future. Unfunded actuarial accrued liabilities exist because liabilities for such service by members exceed assets currently on hand for such future benefits.

Because inflation continues, the value of dollars is decreasing. Looking at just the dollar amounts of assets, benefits paid, member salaries and unfunded actuarial accrued liabilities will be misleading.

While no one or two measures can fully describe the financial condition of the plan, unfunded actuarial accrued liability dollars divided by member salary dollars provide a meaningful index. The smaller the ratio, the stronger the system.

Observation of this relative index over a period of years will give an indication of the financial strength of the system. This ratio has increased at times over the last decade, but the recent trend shows stability.

Actuarial assumptions were revised in 1986 to recognize higher investment returns expected over the long term. Investment returns in the last five years have helped to increase assets, reduce unfunded actuarial accrued liabilities and lower the ratio of unfunded liabilities to member salaries.

Unfunded Actuarial Accrued Liabilities (UAAL)

Valuation Date	Total Actuarial Accrued Liabilities	Valuation Assets	Assets as a % of Accrued Liabilities	Unfunded Actuarial Accrued Liabilities	Member Salaries	UAAL as a % of Member Salaries
12/31/82	\$4,541,424,488	\$3,199,623,171	70.5%	\$1,341,801,317	\$1,802,596,767	74.4%
12/31/83	5,100,834,129	3,752,861,340	73.6%	1,347,972,789	1,923,936,078	70.1%
12/31/84	5,774,927,335	4,393,831,995	76.1%	1,381,095,340	2,091,707,220	66.0%
12/31/85	6,468,709,784	5,194,918,164	80.3%	1,273,791,620	2,270,948,105	56.1%
12/31/86	7,148,766,696	6,247,694,817	87.4%	901,071,879	2,409,384,090	37.4%
12/31/87	8,206,581,941	7,019,254,128	85.5%	1,187,327,813	2,531,357,702	46.9%
12/31/88	8,877,578,866	7,775,426,015	87.6%	1,102,145,851	2,642,664,024	41.7%
12/31/89	9,680,077,646	8,722,658,715	90.1%	957,418,931	2,755,113,097	34.8%
12/31/90	10,554,092,157	9,477,521,126	89.8%	1,076,571,031	2,912,712,448	37.0%
12/31/91	11.521.819.751	10.508.670.579	91.2%	1,013,149,172	3,213,117,152	31.5%

Schedule of Gains and Losses in Accrued Liabilities

Years Ended December 31 Resulting From Differences Between Assumed Experience and Actual Experience

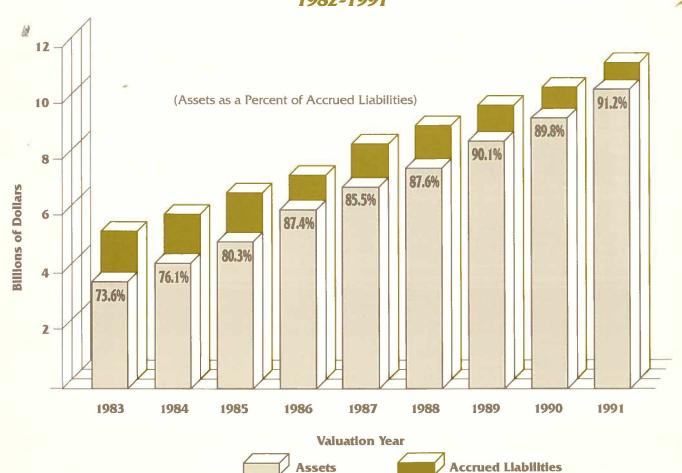
\$ Gain (or Loss) for Year

(In Millions of Dollars)

Type of Activity	1991	1990	1989	1988	1987
Age and service retirements	\$ (5.0)	\$ (4.80)	\$ (6.50)	\$ (4.90)	\$ 0.00
Disability retirements	(6.1)	(4.80)	(3.90)	(2.20)	9.70
Death-in-service benefits	4.9	(0.20)	4.20	6.00	3.70
Withdrawal from employment	(119.9)	(96.80)	(46.70)	(28.50)	(24.60)
Pay increases	71.3	63.10	66.70	152.30	44.50
Investment income	161.8	(53.60)	223.50	85.00	121.20
Other	(15.2)	0.70	(49.70)	(69.40)	(116.70)
Gain (or loss) during year from financial experience	91.8	(96.40)	187.60	138.30	37.80
Non-recurring items ¹	(8.1)	(11.10)	(22.70)	(27.00)	(327.50)2
Composite gain (or loss) during year	\$ 83.7	\$ (107.50)	\$ 164.90	\$111.30	\$ (289.70)

'Non-recurring items include changes due to amendments, changes in actuarial method or assumptions and special transfers to retired life funds. ²Effect of law changes.





Schedule of Computed Employer Contribution Rates

Expressed as a Percentage of Member Payroll

	State Division	School Division	Municipal Division	Judicial Division
Contributions:				
Age and service retirements	11.01%	12.66%	10.46%	14.36%
Disability retirements	1.70%	0.98%	1.63%	1.22%
Survivor benefits	0.65%	0.48%	0.60%	1.45%
Future refunds	2.24%	2.03%	2.36%	1.12%
TPS credit ¹	(0.60)%	(0.30)%	(0.20)%	(0.00)%
Total normal cost	15.00%	15.85%	14.85%	18.15%
Member contributions	8.08% ²	8.00%	8.00%	8.00%3
Employer normal cost	6.92%	7.85%	6.85%	10.15%
Percentage available to amortize unfunded actuarial accrued liabilities	1.90%	1.55%	0.35%	2.05%
Amortization period	31 years	21 years	25 years	16 years
Total employer contribution rate				
for actuarially funded benefits	8.82% ²	9.40%	7.20%	12.20%
Cost of living stabilization fund4	2.00%	2.00%	2.00%	2.00%
Health care fund ⁵	0.80%	0.80%	0.80%	0.80%
Statutory employer contribution rate	11.62%2	12.20%	10.00%	15.00%

^{&#}x27;Credit for any temporary, part-time and seasonal employees excluded from membership prior to 7-1-91.

²Weighted average of more than one statutory rate.

³Assumes no judge will elect a refund of contributions made during the 17th and through the 20th year of service.

⁴Used to provide ad-hoc increases to benefit recipients.

⁵Used to pay a portion of health care premiums for benefit recipients.

Schedule of PERA's Contribution Rate History

Percent of Payroll

Member

Contribution

Rate

7.00%

8.00% 8.00% 8.00%

8.00% 8.75% 8.75% 8.75% 9.00% 9.00% 9.00% 12.30%

Employer

Contribution

Rate

7.00%

8.00% 9.00% 9.50% 10.50% 11.50% 11.64%

13.20% 11.20% 13.20% 13.20%

			Percent o	of Payroll		
			Member Contribution	Employer Contribution		
State Div	ision		Rate	Rate		
Member	S					
		ate Troopers)			State Troopers	
8-1-31	to	6-30-38	3.50% 3.50%	0.00% 3.50%	7-1-45 to 7-1-69 to	6-30-69 6-30-70
7-1-38 7-1-49	to	6-30-49 6-30-58	5.00%	5.00%	7-1-70 to	6-30-71
7-1-58	to	6-30-69	6.00%	6.00%	7-1-71 to	6-30-73
7-1-69	to	6-30-70	7.00%	7.00%	7-1-73 to	6-30-74
7-1-70	to	6-30-71	7.00%	8.00%	7-1-74 to	6-30-75
7-1-71 7-1-73	to	6-30-73 6-30-74	7.00% 7.75%	8.50% 9.50%	7-1-75 to 1-1-82 to	12-31-81 6-30-87
7-1-74	to	6-30-75	7.75%	10.50%	7-1-87 to	6-30-88
7-1-75	to	8-31-80	7.75%	10.64%	7-1-88 to	6-30-89
9-1-80	to	12-31-81	7.75%	12.20%	7-1-89 to	12-31-91
1-1-82	to	6-30-87	8.00%	12.20%		
7-1-87 7-1-88	to	6-30-88 6-30-91	8.00% 8.00%	10.20% - 12.20%		
7-1-91	to	12-31-91	8.00%	11.60%		
			0,00,0			
School D	ivisio	n				
1-1-44	to	12-31-49	3.50%	3.50%		
1-1-50	to	6-30-58	5.00%	5.00%		
7-1-58 7-1-69	to	6-30-69 12-31-69	6.00% 7.00%	6.00% 6.00%		
1-1-70	to	12-31-09	7.00%	7.50%		
1-1-71	to	12-31-71	7.00%	8.50%		
1-1-72	to	6-30-73	7.00%	9.25%		
7-1-73	to	12-31-73	7.75%	9.25%		
1-1-74 1-1-75	to	12-31-74 12-31-75	7.75% 7.75%	10.25% 11.25%		
1-1-76	to	12-31-80	7.75%	12.10%		
1-1-81	to	12-31-81	7.75%	12.50%		
1-1-82	to	6-30-87	8.00%	12.50%		
7-1-87 7-1-88	to	6-30-88 6-30-91	8.00% 8.00%	11.50% 12.50%		
7-1-00	to	12-31-91	8.00%	12.20%		
	-					
Municip		Islan				
1-1-44	to	12-31-49	3.50%	3.50%		
1-1-50	to	6-30-58	5.00%	5.00%		
7-1-58	to	6-30-69	6.00%	6.00%		
7-1-69 1-1-70	to	12-31-69 12-31-70	7.00% 7.00%	6.00% 7.00%		
1-1-71	to	6-30-73	7.00%	7.50%		
7-1-73	to	12-31-73	7.75%	7.50%		
1-1-74	to	12-31-74	7.75%	8.50%		
1-1-75	to	12-31-75	7.75%	9.50%		
1-1-76 1-1-81	to	12-31-80 12-31-81	7.75% 7.75%	9.86% 10.20%		
1-1-82	to	6-30-91	8.00%	10.20%		
7-1-91	to	12-31-91	8.00%	10.00%		
Judicial		and the same of th		F 0001		
7-1-49 7-1-57	to	6-30-57 6-30-73	5.00% 6.00%	5.00% 12.00%		
7-1-57	to	6-30-80	7.00%	12.00%		
7-1-80	to	8-30-80	7.00%	13.00%		
9-1-80	to	12-31-80	7.00%	15.00%		
1-1-82 7-1-87	to	6-30-87 6-30-88	8.00% 8.00%	15.00% 13.00%		
7-1-88	to	12-31-91	8.00%	15.00%		
				7		

STATISTICAL SECTION*

*UNAUDITED



Schedule of Disbursements by Function

(In Thousands of Dollars)

		Benefit	Administrative	Total
	Refunds	Payments ¹	Expenses	Expenses
tate Division				
982	\$ 17,091	\$ 65,067	\$ 1,358	\$ 83,516
983	12,934	77,262	1,782	91,978
984	14,951	87,948	1,960	104,859
985	15,246	99,239	2,248	116,733
986²	13,358	111,483	2,810 ³	127,651
987²	13,735	126,099	2,9933	142,827
988²	14,679	143,901	3,035 ³	161,615
989²	19,942	155,956	4,1343	180,032
990²	15,750	170,434	4,0313	190,21
991²	14,005	185,345	4,5593	203,90
chool Division				
982	\$ 13,242	\$ 58,369	\$ 1,885	\$ 73,49
	12,280	71,506	2,486	86,27
983	13,868	81,989	2,726	98.58
984	13,290	92,511	3.173	108.97
985			4,015³	119,66
986²	12,152	103,500		
987²	11,108	118,194	4,3183	133,62 153.06
9882	11,575	137,135	4,3553	
989²	14,419	153,409	5,8723	173,70
990²	13,200	172,787	5,7753	191,76 213.09
991²	11,113	195,372	6,607³	213,092
Municipal Division				
982	\$ 1,911	\$ 4,937	\$ 198	\$ 7,04
983	2,122	5,989	273	8,38
984	2,715	7,137	314	10,16
ORE				10,10
980	2,796	8,008	365	
	2,796 2,661	8,008 9,352	365 470³	11,16
986²				11,16 12,48
986²	2,661	9,352	470³	11,16 12,48 14,06
986²	2,661 2,690 3,358	9,352 10,860 12,703	470³ 516³	11,16 12,48 14,06 16,58
986 ²	2,661 2,690 3,358 4,017	9,352 10,860 12,703 13,856	470³ 516³ 520³ 683³	11,16 12,48 14,06 16,58 18,55
986 ²	2,661 2,690 3,358	9,352 10,860 12,703	470 ³ 516 ³ 520 ³	11,16 12,48: 14,06 16,58 18,55 19,55
986 ²	2,661 2,690 3,358 4,017 3,640	9,352 10,860 12,703 13,856 15,248	470 ³ 516 ³ 520 ³ 683 ³ 663 ³	11,16 12,48 14,06 16,58 18,55
986 ²	2,661 2,690 3,358 4,017 3,640	9,352 10,860 12,703 13,856 15,248	470 ³ 516 ³ 520 ³ 683 ³ 663 ³	11,16 12,48 14,06 16,58 18,55 19,55 20,81
986 ²	2,661 2,690 3,358 4,017 3,640 3,176	9,352 10,860 12,703 13,856 15,248 16,880	470 ³ 516 ³ 520 ³ 683 ³ 663 ³ 758 ³	11,16 12,48 14,06 16,58 18,55 19,55 20,81
986 ²	2,661 2,690 3,358 4,017 3,640 3,176	9,352 10,860 12,703 13,856 15,248 16,880	470 ³ 516 ³ 520 ³ 683 ³ 663 ³ 758 ³	11,16 12,48 14,06 16,58 18,55 19,55 20,81
986 ²	2,661 2,690 3,358 4,017 3,640 3,176 \$ 27 13 41	9,352 10,860 12,703 13,856 15,248 16,880 \$ 1,072 1,367 1,496	470 ³ 516 ³ 520 ³ 683 ³ 663 ³ 758 ³	11,16 12,48 14,06 16,58 18,55 19,55 20,81 \$ 1,10 1,39 1,55
986 ²	2,661 2,690 3,358 4,017 3,640 3,176 \$ 27 13 41 85	9,352 10,860 12,703 13,856 15,248 16,880 \$ 1,072 1,367 1,496 1,664	470 ³ 516 ³ 520 ³ 683 ³ 663 ³ 758 ³ \$ 10 14 15 17	11,16 12,48 14,06 16,58 18,55 19,55 20,81 \$ 1,10 1,39 1,55 1,76
986 ² 987 ² 988 ² 989 ² 990 ² 991 ² udicial Division 982 983 984 985 986 ²	2,661 2,690 3,358 4,017 3,640 3,176 \$ 27 13 41 85 66	9,352 10,860 12,703 13,856 15,248 16,880 \$ 1,072 1,367 1,496 1,664 1,886	470 ³ 516 ³ 520 ³ 683 ³ 663 ³ 758 ³ \$ 10 14 15 17 21 ³	11,16 12,48 14,06 16,58 18,55 19,55 20,81 \$ 1,10 1,39 1,55 1,76 1,97
986 ²	2,661 2,690 3,358 4,017 3,640 3,176 \$ 27 13 41 85 66 171	9,352 10,860 12,703 13,856 15,248 16,880 \$ 1,072 1,367 1,496 1,664 1,886 2,241	470 ³ 516 ³ 520 ³ 683 ³ 663 ³ 758 ³ \$ 10 14 15 17 21 ³ 22 ³	11,16 12,48 14,06 16,58 18,55 19,55 20,81 \$ 1,10 1,39 1,55 1,76 1,97 2,43
986 ²	2,661 2,690 3,358 4,017 3,640 3,176 \$ 27 13 41 85 66 171 43	9,352 10,860 12,703 13,856 15,248 16,880 \$ 1,072 1,367 1,496 1,664 1,886 2,241 2,446	470 ³ 516 ³ 520 ³ 683 ³ 663 ³ 758 ³ \$ 10 14 15 17 21 ³ 22 ³ 24 ³	11,16 12,48 14,06 16,58 18,55 19,55 20,81 \$ 1,10 1,39 1,55 1,76 1,97 2,43 2,51
985 986 ² 987 ² 988 ² 990 ² 991 ² udicial Division 982 983 984 1985 1986 ² 1987 ² 1988 ² 1989 ²	2,661 2,690 3,358 4,017 3,640 3,176 \$ 27 13 41 85 66 171	9,352 10,860 12,703 13,856 15,248 16,880 \$ 1,072 1,367 1,496 1,664 1,886 2,241	470 ³ 516 ³ 520 ³ 683 ³ 663 ³ 758 ³ \$ 10 14 15 17 21 ³ 22 ³	\$ 1,100 1,394 1,55 1,766 1,394 1,55 1,766 1,975 2,434 2,511 2,720 2,888

^{&#}x27;Benefit payments include both retirement and survivor benefit payments.

²Information for 1986-1991 is on an accrual basis; information for prior years is on a cash basis.

Total for 1986-1991 does not include the Health Care Fund, the Common Operating Fund or the Insurance Dividend Reserve.

Schedule of Receipts by Source

(In Thousands of Dollars)

Member Contributions	Employer Contributions'	Investment Income ²	Purchased Service Credit ³	Misc. Income⁴	Total Revenues
\$ 58,995	\$ 89,973	\$ 114,948	\$ —	\$117	\$ 264,033
61,865	94,148	146,782	_	26	302,821
66,838	101,341	178,807	_	26	347,012
71,777	108,263	251,086	_	34	431,160
75,086	87,901	333,992		41	497,020
79,757	83,022	68,972	_	41	231,792
82,706	86,733	321,160	_	_	490,599
86,146	100,439	507,304	_	_	693,889
90,971	106,133	2,789	1,818		201,711
111,081	141,456	697,957	3,414	_	953,908
\$ 67,985	\$ 110,520	\$ 148,913	\$ —	\$255	\$ 327,673
74,736	118,813	192,869	(100)	56	386,474
80,604		243,906		30	451,366
89,181	138,009	329,785	-	49	557,024
98,030	117,210	447,388	_	47	662,675
104,176	119,167			13	315,063
108,280	123,744	446,556			678,580
114,701	138,821	716,172	_	_	969,694
117,852	142,783		4.337	_	270,532
114,237	121,016	1,002,861	6,534	_	1,244,648
\$ 8,882	\$ 11,347	\$ 13,867	s —	\$ 14	\$ 34,110
9,888	12,604		_		40,995
10,977	13,938	21,744	_	8	46,667
12,033	15,305	30,812		7	58,157
13,029	12,044		-	7	66,167
13,738	12,693	8,368		7	34,806
14,488	12,848	42,562	_		69,898
14,236	13,169		_	-	93,877
15,781	14,600	529	130		31,040
16,127	14,707	93,397	450	_	124,681
\$ 722	\$ 1,366	\$ 1,882	\$ —	\$ —	\$ 3,970
736			-		4,657
874	1,476		_	_	5,181
879		3,469			5,971
875		4,438	_	_	6,678
			_	_	3,144
			_	_	6,918
			_	_	9,789
			40.00		
1,047	1,599	31	28	_	2,705
	\$ 58,995 61,865 66,838 71,777 75,086 79,757 82,706 86,146 90,971 111,081 \$ 67,985 74,736 80,604 89,181 98,030 104,176 108,280 114,701 117,852 114,237 \$ 8,882 9,888 10,977 12,033 13,029 13,738 14,488 14,236 15,781 16,127	\$ 58,995 \$ 89,973 61,865 94,148 66,838 101,341 71,777 108,263 75,086 87,901 79,757 83,022 82,706 86,733 86,146 100,439 90,971 106,133 111,081 141,456 \$ 67,985 \$ 110,520 74,736 118,813 80,604 126,826 89,181 138,009 98,030 117,210 104,176 119,167 108,280 123,744 114,701 138,821 117,852 142,783 114,237 121,016 \$ 8,882 \$ 11,347 9,888 12,604 10,977 13,938 12,033 15,305 13,029 12,044 13,738 12,693 14,488 12,848 14,236 13,169 15,781 14,600 16,127 14,707 \$ 722 \$ 1,366 736 1,380 874 1,476 879 1,623 875 1,365 872 1,207 958 1,401	\$ 58,995	Contributions¹ Income² Service Credit² \$ 58,995 \$ 89,973 \$ 114,948 \$ — 61,865 94,148 146,782 — 66,838 101,341 178,807 — 71,777 108,263 251,086 — 75,086 87,901 333,992 — 79,757 83,022 68,972 — 86,146 100,439 507,304 — 90,971 106,133 2,789 1,818 111,081 141,456 697,957 3,414 \$ 67,985 \$ 110,520 \$ 148,913 \$ — 74,736 118,813 192,869 — 74,736 118,813 192,869 — 98,030 117,210 447,388 — 98,030 117,210 447,388 — 104,176 119,167 91,707 — 118,280 123,744 446,556 — 114,701 138,821 716,172 —	\$ 58,995 \$ 89,973 \$ 114,948 \$ — \$ 117 61,865 94,148 146,782 — 26 66,838 101,341 178,807 — 26 71,777 108,263 251,086 — 34 75,086 87,901 333,992 — 41 79,757 83,022 68,972 — 41 82,706 86,733 321,160 — — 86,146 100,439 507,304 — — 90,971 106,133 2,789 1,818 — 111,081 141,456 697,957 3,414 — \$ 67,985 \$ 110,520 \$ 148,913 \$ — \$ 255 74,736 118,813 192,869 — 56 80,604 126,826 243,906 — 30 89,181 138,009 329,785 — 49 98,030 117,210 447,388 — 47 104,176 119,167 91,707 — 13 108,280 123,744 446,556 — — 114,701 138,821 716,172 — — 117,852 142,783 5,560 4,337 — 111,237 121,016 1,002,861 6,534 — \$ 8,882 \$ 11,347 \$ 13,867 \$ — \$ 14 9,888 12,604 18,493 — 10 10,977 13,938 21,744 — 8 12,033 15,305 30,812 — 7 13,738 12,693 8,368 — 7 14,428 12,848 42,562 — — 13,738 12,693 8,368 — 7 14,488 12,848 42,562 — — 15,781 14,600 529 130 — 16,127 14,707 93,397 450 — \$ 722 \$ 1,366 \$ 1,882 \$ — \$ — 15,781 14,600 529 130 — 16,127 14,707 93,397 450 — \$ 722 \$ 1,366 \$ 1,882 \$ — \$ — 15,781 14,600 529 130 — 16,127 14,707 93,397 450 — \$ 722 \$ 1,365 4,438 — — 16,23 3,469 — — 1872 1,207 1,055 — — 1872 1,207 1,055 — — 1,055 — — 1,055 — — 1,055 — — 1,055 — — 1,055 — — 1,055 — — 1,055 — — 1,055 — — 1,005 — — 1

^{&#}x27;The member and employer contribution rate history can be found on page 60. Employer contributions for 1986-1991 are net of Health Care Fund and Cost of Living Stabilization Fund contributions.

²Investment income for 1986-1991 does not include amounts allocated to the Health Care Fund, Cost of Living Stabilization Fund and Common Operating Fund.

³Receipts for purchased service credit in 1990-1991 are shown as separate line items. In previous years, they were combined with "Other Net Transfers" in the Financial Statements.

⁴Membership fees not available for benefits. Membership fee discontinued after 1987.

Schedule of Benefit Disbursements by Type*

(In Thousands of Dollars)

Year Ended	Retirement Benefits	Survivor Benefits	Refunds	Health Care	Total	
12/31/82	\$ 124,494	\$ 4,951	\$27,733	\$ —	\$ 157,178	
12/31/83	150,378	5,746	28,843		184,967	
12/31/84	171,980	6,385	34,519	_	212,884	
12/31/85	193,936	7,485	32,069	_	233,490	
12/31/86	217,403	8,818	28,237	5,031	259,489	
12/31/87	247,963	9,431	27,704	16,841	301,939	
12/31/88	286,261	9,924	29,655	21,282	347,122	
12/31/89	315,206	10,675	38,406	19,308	383,595	
12/31/90	349,931	11,363	32,621	29,948	423,863	
12/31/91	388,526	12,118	28,379	35,540	464,563	

^{*}Numbers are derived on accrual basis.

Member and Benefit Recipient Statistics*

		State Division		School Division	Municipal Division		Judicial Division		Total
Active members - 12/31/91		47,543		75,408	9,105		255		132,311
Retirements during 1991:									
Disability retirements		167		176	39		0		382
Service retirements		640		1,110	96		5		1,851
Total		807		1,286	135		5		2,233
Retirement benefits:									
Total receiving retirement benefits									
on Dec. 31, 1990		14,813		16,416	1,558		155		32,942
Total retiring during 1991		807		1,286	135		5		2,233
Cobeneficiaries continuing after retiree's death		172		117	13		1		303
Returning to retirement rolls from suspension		24		18	2		0		44
Total		15,816		17,837	1,708		161		35,522
Retirees deceased during year		(512)		(487)	(55)		(4)		(1,058)
Retirees returning to work		(26)		(17)	(5)		0		(48)
12/31/91		15,278		17,333	1,648		157		34,416
Total paid in retirement benefits in 1991	\$1	79,749,754	\$1	190,530,197	\$ 15,964,574	\$ 2	2,787,157	\$ 3	389,036,682
Average monthly benefit on 12/31/91 Average monthly benefit for	\$	963	\$	1,008	\$ 846	\$	1,490	\$	980
members retired during 1991	\$	1,264	\$	1,252	\$ 997	\$	1,943	\$	1,243
Survivor benefit accounts:									
Total benefits being paid on 12/31/91		645		599	124		19		1,387
Total benefits paid in 1991	\$	6,008,501	\$	4,950,489	\$ 928,136	\$	263,783	\$	12,150,909
Deferred benefits:									
Deferred retirements to age 60 or 65		936		1,699	112		8		2,755
Total annual future benefits	\$	7,500,000	\$	11,100,000	\$ 1,000,000	\$	51,000	\$	19,651,000
Future survivor beneficiaries		40		42	4		0		86
Total annual future benefits	\$	197,560	\$	156,114	\$ 18,604	\$	0	\$	372,278

^{*}Numbers are not actuarially derived. Rather, they are calculated on a cash/calendar year basis and include the Cost of Living Stabilization Fund and survivor benefits.

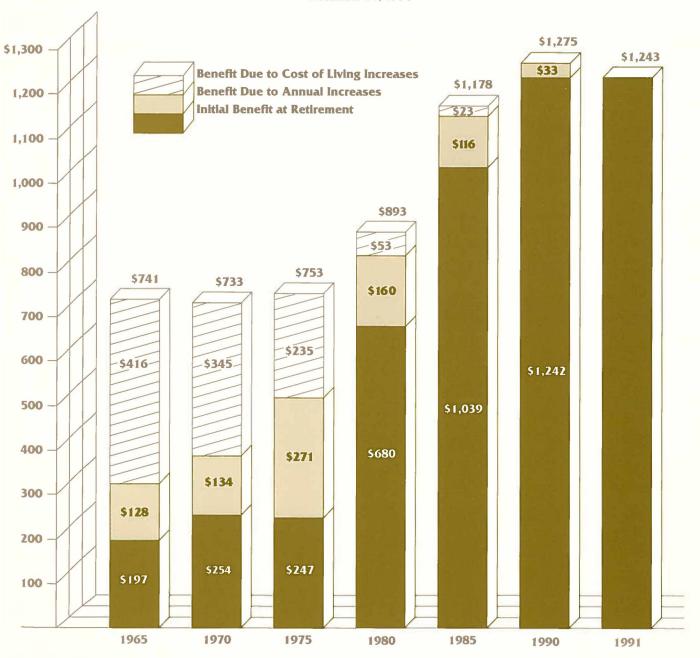
Schedule of Average Retirement Benefits Payable*

Year Ended	Average Monthly Benefit	Average Age at Retirement	Average Current Age of Retirees	Average Years of Service at Retirement
12/31/82	\$570	62.5	70.0	16.7
12/31/83	596	62.3	70.0	17.0
12/31/84	648	62.1	70.0	17.2
12/31/85	676	61.8	70.1	17.4
12/31/86	727	61.6	70.1	17.5
12/31/87	778	61.4	69.7	17.8
12/31/88	828	61.7	69.8	18.0
12/31/89	864	61.1	70.0	18.2
12/31/90	935	60.9	70.0	18.3
12/31/91	980	60.7	70.1	18.5

^{*}Includes disability retirements, but not survivor benefits.

Average Monthly Benefit by Year of Retirement Graph

December 31, 1991



Schedule of Affiliated Employers

State Division

Agencies and Instrumentalities

Colorado Association of School Boards

Colorado Compensation Insurance Authority

Colorado Council on Arts and Humanities

Colorado High School Activities Association

Colorado Lottery

Colorado State Fair

Colorado State Hospital

Colorado Student Loan Program

Colorado Water Resources and

Power Development Authority

Department of Administration

Department of Agriculture

Department of Corrections

Department of Education

Department of Health

Department of Institutions

Department of Labor and Employment

Department of Law

Department of Local Affairs

Department of Military Affairs

Department of Natural Resources

Department of Personnel

Department of Public Safety

Department of Regulatory Agencies

Department of Revenue

Department of Social Services

Department of State

Department of Transportation

Department of the Treasury

Fire and Police Pension Association

General Assembly

Grand Junction Regional Center

Joint Budget Committee

Judicial Department

Legislative Council

Moffat Tunnel Commission

Office of the District Attorneys

Office of the Governor

Office of Legislative Legal Services

Office of the Lieutenant Governor

Public Employees' Retirement Association

Pueblo Regional Center

Special District Association of Colorado

State Auditor's Office

State Historical Society

Wheat Ridge Regional Center

Institutions of Higher Education

Adams State College

Aims Community College

Arapahoe Community College

Auraria Higher Education Center

Aurora Community College

Colorado Advanced Technical Institute

Colorado Mountain College

Colorado Northwestern Community College

Colorado School of Mines

Colorado State University

Commission on Higher Education

Denver Community College

Fort Lewis College

Front Range Community College

Lamar Community College

Mesa State College

Metropolitan State College at Denver

Morgan Community College

Northeastern Junior College

Otero Junior College

Pikes Peak Community College

Pueblo Vocational Community College

Red Rocks Community College

School for the Deaf & Blind

State Board for Community Colleges and

Occupational Education

The State Colleges in Colorado

Trinidad State Junior College

University of Colorado at Boulder

University of Colorado at Colorado Springs

University of Colorado at Denver

University of Colorado Health Sciences Center

University of Northern Colorado

University of Southern Colorado

Western State College

School Division

Adams County

Adams County School District 14
Bennett School District 29J
Brighton School District 27J
Mapleton School District 1
Northglenn-Thornton School District 12
Strasburg School District 31J
Westminster School District 50

Alamosa County

Alamosa County School District Re-11J Sangre de Cristo School District Re-22J

Arapahoe County

Adams-Arapahoe School District 28J Byers School District 32J Cherry Creek School District 5 Deer Trail School District 26J Englewood School District 1 Littleton School District 6 Sheridan School District 2

Archuleta County

Archuleta County School District 50 Jt

Baca County

Campo School District RE-6 Pritchett School District RE-3 Springfield School District RE-4 Vilas School District RE-5 Walsh School District RE-1

Bent County

Las Animas School District RE-1 McClave School District RE-2

Boulder County

Boulder Valley School District RE2 St. Vrain Valley School District RE1J

Chaffee County

Buena Vista School District R-31 Salida School District R-32(J)

Cheyenne County

Cheyenne County School District Re-5 Kit Carson School District R-1

Clear Creek County

Clear Creek School District RE-1

Conejos County

North Conejos School District RE1J Sanford School District 6J South Conejos School District RE 10

Costilla County

Centennial School District R-1 Sierra Grande School District R-30

Crowley County

Crowley County School District RE-1

Custer County

Custer County Consolidated School District C-1

Delta County

Delta County School District 50(J)

Dolores County

Dolores County School District Re No. 2

Douglas County

Douglas County School District Re 1

Eagle County

Eagle County School District Re 50

Elbert County

Agate School District 300 Big Sandy School District 100J Elbert School District 200 Elizabeth School District C-1 Kiowa School District C-2

El Paso County

Academy School District #20
Calhan School District RJ1
Cheyenne Mountain School District 12
Colorado Springs School District 11
Edison School District 54 Jt
Ellicott School District 22
Falcon School District 49
Fountain School District 8
Hanover School District 28
Harrison School District 2
Lewis-Palmer School District 38
Manitou Springs School District 14
Miami/Yoder School District 60 Jt
Peyton School District 23 Jt
Widefield School District 3

Fremont County

Canon City School District Re-1 Cotopaxi School District Re-3 Florence School District Re-2

Garfield County

Garfield School District Re-2 Garfield School District 16 Roaring Fork School District Re-1

Gilpin County

Gilpin County School District Re-1

Grand County

East Grand School District 2 West Grand School District 1

Gunnison County

Gunnison Watershed School District Re1J

Hinsdale County

Hinsdale County School District Re-1

Huerfano County

Huerfano School District Re-1 La Veta School District Re-2

Jackson County

North Park School District R-1

Jefferson County

Jefferson County School District R-1

Klowa County

Eads School District Re-1
Plainview School District Re-2

Kit Carson County

Arriba-Flagler Consolidated School District No. 20 Bethune School District R-5 Burlington School District Re-6] Hi-Plains School District R-23 Stratton School District R-4

Lake County

Lake County School District R-1

La Plata County

Bayfield School District 10Jt-R Durango School District 9-R Ignacio School District 11 Jt

Larimer County

Park School District R-3 Poudre School District R-1 Thompson School District R-2J

Las Animas County

Aguilar Reorganized School District 6 Branson Reorganized School District 82 Hoehne Reorganized School District 3 Kim Reorganized School District 88 Primero Reorganized School District 2 Trinidad School District 1

Lincoln County

Genoa/Hugo School District C-113 Karval School District Re 23 Limon School District Re 4]

Logan County

Buffalo School District Re-4 Frenchman School District Re-3 Plateau School District Re-5 Valley School District Re-1

Mesa County

De Beque School District 49 Jt Mesa County Valley School District 51 Piateau Valley School District 50

Mineral County

Creede Consolidated School District 1

Moffat County

Moffat County School District Re No.1

Montezuma County

Dolores School District RE 4A Mancos School District Re-6 Montezuma-Cortez School District Re 1

Montrose County

Montrose County School District Re-1J West End School District Re-2

Morgan County

Brush School District Re-2 (J)
Fort Morgan School District Re-3
Weldon Valley School District Re-20 (J)
Wiggins School District Re-50 (J)

Otero County

Cheraw School District 31
East Otero School District R1
Fowler School District R4J
Manzanola School District 3J
Rocky Ford School District R2
Swink School District 33

Ouray County

Ouray School District R-1 Ridgway School District R-2

Park County

Park County School District Re-2 Platte Canyon School District 1

Phillips County

Haxtun School District Re-2J Holyoke School District Re-1J

Pitkin County

Aspen School District 1

Prowers County

Granada School District Re-1 Holly School District Re-3 Lamar School District Re-2 Wiley School District Re-13 Jt

Pueblo County

Pueblo City School District 60 Pueblo County School District 70

Rio Blanco County

Meeker School District RE1 Rangely School District RE4

Rio Grande County

Del Norte School District C-7 Monte Vista School District C-8 Sargent School District Re-33]

Routt County

Hayden School District Re 1 South Routt School District Re 3 Steamboat Springs School District Re 2

Saguache County

Center Consolidated School District 26 Jt Moffat School District 2 Mountain Valley School District Re 1

San Juan County

Silverton School District 1

San Miguel County

Norwood School District R-2J Telluride School District R-1

Sedgwick County

Julesburg School District Re 1 Platte Valley School District Re3

Summit County

Summit School District Re 1

Teller County

Cripple Creek-Victor School District Re-1 Woodland Park School District RE-2

Washington County

Akron School District R-1 Arickaree School District R-2 Lone Star School District 101 Otis School District R-3 Woodlin School District R-104

Weld County

Ault-Highland School District Re-9 Briggsdale School District Re-10 Eaton School District Re-2 Fort Lupton School District Re-8 Gilcrest School District Re-1 Greeley School District 6 Johnstown School District Re-5J Keenesburg School District Re-3 Pawnee School District Re-12 Platte Valley School District Re-7 Prairie School District Re-11 Windsor School District Re-4

Yuma County

East Yuma County School District R-J-2 West Yuma County School District R-J-1

Boards of Cooperative Educational Services (BOCES)

Adams County BOCES
East Central BOCES
Mountain BOCES
Northeast BOCES
Northern Colorado BOCES
Northwest Colorado BOCES
Pikes Peak BOCES
Rio Blanco BOCES
South Central BOCES
South Platte Valley BOCES
Southeastern BOCES
Weld BOCES
West Central BOCES

Boards of Cooperative Services (BOCS)

Arkansas Valley BOCS San Juan BOCS San Luis Valley BOCS Southeast Metropolitan BOCES Southwest BOCS

Vocational Schools

Delta-Montrose Area Vocational School San Juan Basin Area Vocational School

Municipal Division (as of 6-30-92)

Alamosa Housing Authority Aurora Housing Authority Beulah Water Works District¹ Black Hawk-Central City Sanitation District Blanca-Fort Garland Metropolitan District Boxelder Sanitation District¹ Brush Housing Authority Carbon Valley Park & Recreation District Castle Pines Metropolitan District Centennial Soil Conservation District¹ Center Housing Authority City of Alamosa City of Arvada City of Boulder City of Colorado Springs City of Fort Morgan City of Lafayette City of Manitou Springs City of Pueblo City of Wray City of Yuma Colorado Housing Finance Authority Colorado Springs Public Utilities Columbine Knolls-Grove Metropolitan Recreation District1 Costilla Housing Authority Cunningham Fire Protection District¹ Douglas Public Library District3 East Cheyenne Ground Water Management District1 East Larimer County Water District

Eastern Rio Blanco Parks & Recreation Department

Fairmont Fire Protection District Forest Lakes Metropolitan District

Fremont Sanitation District Fremont Soil Conservation District¹ Garfield Sanitation District Housing Authority of Arribat Housing Authority of the County of Saguache Housing Authority of the Town of Limon' Lamar Housing Authority Lamar Utilities Board Left Hand Water District Longmont Housing Authority Louisville Fire Protection District3 Meeker Regional Library District Memorial Hospital—Colorado Springs Montrose Recreation District3 Morgan Soil Conservation District¹ Mountain Village Metropolitan District Mountain Water and Sanitation District Mountain View Fire Protection District¹ No. Chaffee County Regional Library Northeast Colorado Health Department Pine Drive Water District Pueblo City-County Health Department Pueblo Library District Rampart Regional Library District¹ Red, White & Blue Fire Protection District¹ Rio Blanco Fire Protection District¹ Rio Blanco Water Conservancy District¹ Routt County Soil Conservation District Sable-Altura Fire Protection District¹ San Miguel County Public Library Sheridan Sanitation District #13 Southwest Regional Library Steamboat II Water and Sanitation District¹ Steamboat Springs Rural Fire Protection District Town of Bayfield Town of Crawford Town of Dinosaur Town of Estes Park Town of Firestone Town of Lake City Town of Platteville Town of Seibert Town of Silver Plume¹ Tri-County Health Department Weld County Health Department Western Rio Blanco Metropolitan Recreation & Park District West Greeley Soil Conservation District¹

Judicial Division

Yuma Housing Authority

1st-23rd District Court
24th District-Denver Probate Court
25th District-Denver Juvenile Court
Adams County Court
Alamosa County Court
Arapahoe County Court
Archuleta County Court
Baca County Court
Bent County Court
Boulder County Court

Windsor-Severance Library District

Chaffee County Court Cheyenne County Court Clear Creek County Court Conejos County Court Costilla County Court Court of Appeals Crowley County Court Custer County Court Delta County Court **Denver County Court Dolores County Court Douglas County Court Eagle County Court** El Paso County Court **Elbert County Court** Fremont County Court Garfield County Court Gilpin County Court **Grand County Court Gunnison County Court** Hinsdale County Court **Huerfano County Court** Jackson County Court Jefferson County Court Kiowa County Court Kit Carson County Court La Plata County Court Lake County Court Larimer County Court Las Animas County Court Lincoln County Court Logan County Court Mineral County Court Moffat County Court Montezuma County Court Morgan County Court Otero County Court **Ouray County Court** Park County Court Phillips County Court Pitkin County Court **Prowers County Court** Pueblo County Court Rio Blanco County Court Rio Grande County Court **Routt County Court** Saguache County Court San Juan County Court San Miguel County Court Sedgwick County Court Summit County Court Supreme Court Teller County Court Washington County Court Weld County Court Yuma County Court

¹ Affiliated in 1991.

² Inactive affiliate.

³ Affiliated in 1992.

OTHER PERA PROGRAMS SECTION*

*UNAUDITED

1



Health Care Program

The PERA Health Care Program began covering enrolled benefit recipients and qualified dependents on July 1, 1986. This benefit was developed after legislation in 1985 established the Program and the Health Çare Fund.

The Health Care Fund receives employer contributions equal to 0.8 percent of member salaries from affiliated employers. This allocation is invested, and any earnings are added to the Fund.

Under the Program, PERA subsidizes a portion of the monthly premium for health care coverage. The benefit recipient pays any remaining part of that premium through an automatic deduction from the monthly retirement benefit. In 1991, the maximum subsidy was \$115 per month for benefit recipients whose retirement benefits were based on 20 years or more of PERA

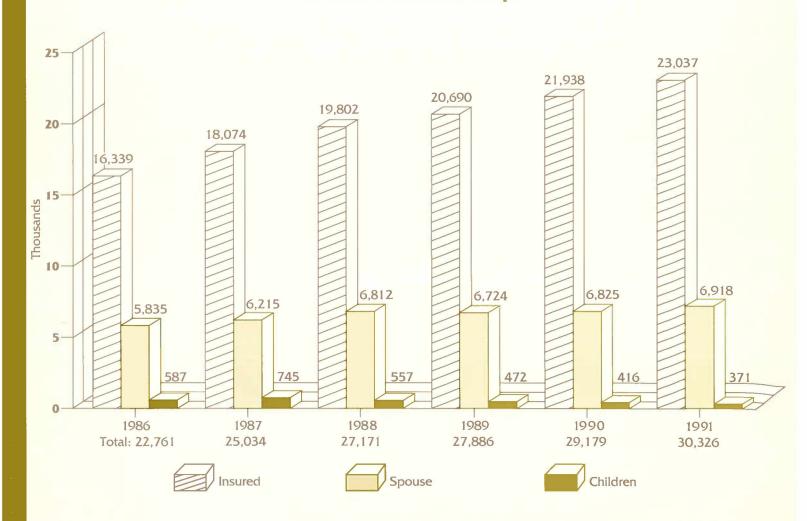
service credit. For those with less service, the subsidy was reduced by 5 percent (\$5.75) for each year under 20 years.

Monthly premium costs for participants depend on the health care plan selected, the number of persons being covered, Medicare eligibility and the number of years of service credit.

In 1991, PERA contracted with a major medical indemnity carrier to administer claims for three self-insured programs, and with seven Health Maintenance Organizations providing services within Colorado.

The annual open enrollment for the Health Care Program was held between May 1 and June 30, 1991. During that period, PERA benefit recipients could join the Program for the first time, transfer from one carrier to another or add or delete eligible dependents.

Health Care Enrollments Graph



Life Insurance Program

PERA provides its members with access to two group, decreasing-term life insurance plans — Rocky Mountain Life and Prudential, a plan offered by the National Conference on Public Employee Retirement Systems. In 1988, the Board voted to transfer the plan underwritten by the New York Life Insurance Company to Rocky Mountain Life. Members may join one or both of the plans, and may continue coverage into retirement. During the annual open enrollment period, members enrolling are not

required to furnish evidence of good health for themselves or their dependents. Members may enroll outside the enrollment period, but must provide a health statement from a physician. Monthly premiums are paid by payroll deduction; the premiums are \$9 for Prudential and \$10 for Rocky Mountain Life.

PERA also administers a special Rocky Mountain Life plan for retired State employees. This group is closed with no provision for new participants.

Life Insurance Enrollment

Year	New York Life/ Rocky Mountain Life	Rocky Mountain Life Prudential (Closed Group) Total Enroll				
1982	17.553	12,077	_	29,630		
1983	18,242	12,298		30.540		
1984	19,643	12,837	_	32,480		
1985	21,296	13,635	_	34,931		
1986	23,052	13,863	5,030	41,945		
1987	24,394	14,113	4,800	43,307		
1988	25,157	14,152	4,600	43,909		
1989	33,241	14,306	4,462	52,009		
1990	34,245	15,129	4,208	53,582		
1991	36,191	16,332	3,602	56,125		

Life Insurance Dollars Paid

Year	New York Life/ Rocky Mountain Life	Number of Payments*	Prudential	Number of Payments*	Rocky Mountain Life (Closed Group)	Number of Payments*	Total Paid	Total Payments*
1982	\$1,388,697	_	\$ 528,458		_		\$1,917,155	_
1983	1,114,010	_	447,706	_	_	_	1,561,716	_
1984	1,484,583	_	872,860	_	_	_	2,357,443	_
1985	1,950,696		910,057		_	_	2,860,753	_
1986	1,670,531	_	802,016	_	\$119,000		2,591,547	_
1987	2,097,665	_	865,783	_	212,000	_	3,175,448	_
1988	1,121,670	_	711,309	_	297,000	_	2,129,979	
1989	3,548,164	_	1,080,144	_	209,504	_	4,837,812	_
1990	4,766,110	_	951,121	_	302,809	_	6,020,040	_
1991	5,383,194	808	1,276,347	188	361,256	180	7,020,797	1,176

^{*}Number of payments made are only available for 1991.

401(k) Voluntary Investment Program

The PERA Voluntary Investment Program (VIP) was established on July 1, 1985, under Section 401(k) of the Internal Revenue Code. Program participation is voluntary, and contributions are entirely separate from those that members make to PERA each month.

VIP allows participants to defer income taxes by investing some of their current income for retirement. Earnings on VIP investments are also tax-deferred.

In 1991, members were able to invest up to 18 percent of their annual gross salary, to a maximum of \$8,475 in the Program. Contributions are deducted from the participant's monthly salary.

VIP offers members a choice of three funds in which they may invest. They are a Short-Term Fund, a Fixed Income (bond) Fund and a Growth Stock Fund. Each quarter, members may change their contribution amount, transfer their account balance between funds and change the contribution percentage designated to each fund.

The Program also has loan and hardship withdrawal provisions.

On December 31, 1991, VIP had accumulated assets of \$30.017.532 and 3.094 accounts.

Year	Assets	Number of Accounts		
1985 (July-Dec.)	\$ 203,272	236		
1986	1,750,673	902		
1987	4,292,351	1,322		
1988	7,975,075	1,596		
1989	13,359,939	2,103		
1990	19,242,631	2,594		
1991	30.017.532	3.094		

401(k) Fund Performance

Fund	Jan-Mar 1991	Apr-Jun 1991	July-Sept 1991	Oct-Dec 1991	Calendar Year 1991	Calendar Year 1990	Since Inception (7-1-85)
Short Term	2.0%	1.9%	1.9%	1.8%	7.8%	9.0%	72.2%
Fixed Income	2.1%	0.9%	7.4%	6.2%	17.5%	11.0%	115.8%
Growth Stock	10.7%	-0.4%	8.1%	9.1%	30.0%	-4.0%	140.1%

Note: The "time weighted" or actual return a participant may have realized may be less or more, depending on when the member began investing in a particular fund and/or the amount of investments the member had in a respective fund during each calendar quarter. A "time-weighted" rate of return measures each quarter's earnings based on \$1 invested in each fund for the period specified. The rate of return is quoted prior to the administrative charge.